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AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

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A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

SIXTEENTH ANNUAL SHOW OF THE AMERICAN INSTITUTE.

In accordance with its programme, the show of this great National Society was opened at Niblo's spacious saloon and garden in Broadway, on Tuesday the 10th October, for the exhibition of Manufactured Articles, Vegetables, Seeds, Fruits, Flowers, Dairy Products. &c., &c., and continued seventeen days. The daily concourse of visiters to the show evinced an unflagging interest on the part of the public in these matters, and we are told, notwithstanding an increase of free tickets issued, that more money has been taken the present year than ever before. Bands of music or a choir of singers were in attendance most of the time during the day, to give greater variety to the scene, and in the evening, fire-works were at play to add to the dazzling brilliancy of the illuminated display. In addition to these, for the entertainment of the graver part of the community, addresses of a highly instructive kind were delivered almost every evening, by eminent men from different parts of the Union, on subjects appropriate to the occasion.

Manufactured Articles.—In these generally we noticed an improvement, especially in Silk Fabrics, India Rubber Goods, Cutlery, and light Iron Furniture; these, however, not particularly concerning agriculture, we must leave our readers in want of more information respecting them, to seek it in the full reports of the committees of the Institute on these subjects.

Agricultulal Implements.—The show in these was moderate, but most of them were good of their kind. Among the new things which more particularly attracted our attention, were a Potato-Digger; a Dog-Power Machine for churning, as figured page 272 of this No.; a Single Horse-Power; an Ox-Yoke with bow-spring instead of the common key; a Subsoil Plow, (price $10,) cheap and effectual; Three-share Cultivators, stirring the earth effectually in the centre of the row with the middle share, and throwing the dirt to the right and left with the hind shares like a small plow; Three-share Plows, turning three light furrows at a time; and an improved Fanning-Mill. There were many other instruments, some with new improvements, which we thought well of, but as we had no opportunity of testing their merits, we shall defer saying more till we can inspect the reports of the committees on these subjects.

Vegetables.—Here was a good display, especially of several new kinds of seedling Potatoes, and other roots of which we think highly. Some of

these were of monstrous growth, especially the Roots and Squashes. A Chinese Pumpkin of a curious rag-wheel shape weighed 118 pounds; and Egg-Plants we saw nearly as large as our hat-crown.

Grain.—The Cereal display, we must confess, with the exception of Indian and Egyptian corn, was meager enough. Some ears of the former we measured were 15 inches long, of the grain part; and others were of great circumference, and showed as high as twenty-one rows, which is rather extraordinary for northern corn. The seed of the Egyptian Corn is something like Broom Corn; the stalks are said by those who have tried it, to be admirably adapted for summer soiling.

Fruits.—Here was a very good show indeed, with the exception of Peaches, it being passed the season for these. A Bell Pear was exhibited measuring 18½ inches round, and weighing 33 ounces; Apples 18½ ounces each; and Chinese and other Quinces of great size. There was quite a variety of grapes, and good of their kind; Spanish Chestnuts four times the size of the common American, and various other things of which we shall make due mention hereafter.

Flowers.—It was so late in the season that we could not expect a great display of these; there were, however, a few large bouquets, beautifully made up from quite a variety of flowers. The Dahlias were in great profusion, and a superb show. There were some new seedlings exhibited which struck us as perfect in form, shape, and color.

Dairy Products.—In Cheese there was a goodly show, some immensely large, weighing nearly 200 pounds. Of Butter there was a less quantity, though the quality seemed unexceptionable.

Plowing-Match.

This came off on Monday the 16th October, within a mile of the flourishing town of Paterson, N. J., to and from which a special train of cars was furnished gratis by the liberality of the Railroad Company, for the members of the Institute, all invited guests, and the instruments of husbandry.

At 10 o'clock, A. M., a large company was taken up at the station-house at Jersey City, among whom we noticed several distinguished strangers, the Marquis de Cadenas and others from Cuba; Cols. Bankhead and Cross, with other officers of the United States Army; Commodore Dekay and Captain Reed of the Navy; together with General Fairbanks, and quite a party of gentlemen from Boston, &c., &c. The fine bands from the Second Regiment of Artillery, and the ship of the line North Carolina, were in attendance, and played alternately upon the occasion. As we rolled into Paterson, a peal of cannon saluted us, and we found a numerous assembly of Jerseymen waiting our arrival at the depot. A long procession was now formed, and with the banners of the Institute floating in the air at the head of it, and the inspiring strains of the bands, we marched through the streets in double file to the Passaic Hotel.

Here the officers of the day were chosen as follows:—

General Johnson of Brooklyn, N. Y., *President;* Andrew Parsons, of N. J., Philip Schuyler, of N. Y., William Condell, of Paterson, N. J., James Tallmadge, N. Y., James Clowes, N. J., Adoniram Chandler, N. Y., Edward Clark, N. Y., Abraham Godwin, of Paterson, George C. Dekay, Hudson Co., N. J., James L. Morris, Essex Co., N. J., Philemon Dickerson, Passaic Co., N. J., John O. Choules, Mass., Stephen Fairbanks, Mass., *Vice Presidents;* Henry Meigs, of New York, *Secretary;* Edward N. Dickerson, of Paterson, *Assistant Secretary,*

The following gentlemen were appointed judges of the Plowing: Messrs. Johnson, Schuyler, and J. D. Ward.

The several Vice Presidents were made Marshals of the day under the direction of General Godwin, one of their number.

These proceedings being over, and the plows not yet quite ready to start, most of the company now took the opportunity of visiting the Falls. The weather was delightful, and the river appeared to great advantage, rushing in a bold sliding leap down a chasm of about 70 feet. From these precipices it is well known the lamented Mrs. Cummings was precipitated below in the most unaccountable manner to certain destruction; here, also, the renowned Sam Patch first took his initiatory leaps, which finally ended in his death. The scenery around is wild and romantic, and well worthy of being visited. But the Plowing-Match being the grand event, after a hasty view of the Falls and the delightful grounds around, we hastened to the field of strife about a mile distant.

Arrived on the ground, General Johnson called the assembly to order, when fifteen plows were entered. The soil was of a rich gravelly loam, in sod, and well calculated to test the merits of the plows. Previous however to starting on their match, Mr. Teschemaker of Boston delivered a capital address of about fifteen minutes duration, which was listened to with interest, and roundly

applauded. The bands now struck up an enlivening march, and everything being ready, away the teams started at a rapid rate. The task was one eighth of an acre, to be done within an hour. It was a pretty close contest. A splendid pair of brindle cattle, however, driven by the plowman, accomplished the task first, having done it in 19 minutes. We must confess this rather surprised us, for we had no idea that horses could so easily be beaten in the quickness of pace. The cattle were loudly cheered on finishing their last furrow, and did not seem to be worried at all with the feat, but looked up quite honestly, as much as to say, "Gentlemen, that can easily be beaten when we will." After this the plows were tested by the dynamometer. That of the least draught showed 350 pounds, while the one of the greatest indicated 600 pounds.

The first premium, a silver cup, was awarded to Mr. Cornelius Van Winkle of Paterson, who used Eastman's plow of Baltimore. It was drawn by the brindle cattle above. We did not learn whether he was a descendant of the renowned *Rip*, but if so, he proved himself anything than *very sleepy* on the occasion. The award was not so much for the quickness of time, as it was for the perfect manner of the work. He, however, had some advantage in the soil; his part of the field being the lightest and dryest, and the sod not of so thick and firm a texture.

The second premium of a silver medal, was given to William Clowes of New Jersey—a Bergen plow.

The third premium, a diploma, to John Swan—also a Bergen plow.

As we know many persons will be interested in this plowing-match, and wish to learn all the particulars of the working of the plows, &c., at our request, Mr. E. Cornell, a practical mechanic and farmer, has been so obliging as to make us out the following report. We have every confidence in his opinion, as he has given the subject of plows and plowing his particular attention for several years past.

The first on my list is the Bergen plow, dimensions as follows: length of beam forward of the standard, 3 feet 7 inches; length from point to heel of mould-board, 3 feet 5 inches; length of landside, 2 feet 7 inches; width of cut, 9¼ inches; width of heel, 8½ inches. This plow has a good shaped mould-board for ease of draught, but is slender back of the point, and would be liable to break in rough grounds. It plowed its land with 23 furrows, about 5½ to 6 inches deep—the furrows turned smooth, and slightly lapped. It took the third premium. Trial with dynamometer, draught 350 pounds; furrow 6 inches deep, 12 inches wide; soil a light gravelly loam.

Second, Wisconsin plow, from Peekskill, No. 29. Length of beam forward of standard, 4 feet; length from point to heel of mould-board, 3 feet 2½ inches; length of landside, 2 feet 5 inches; width of cut, 11½ inches; width of heel 9 inches. This plow has a good-shaped mould-board for sward plowing, and performed its work with 19 furrows, 6 inches deep; furrow turned smooth, and in a handsome manner, slightly lapped, and very little broken. Trial with dynamometer, draught 450 pounds; furrow 12 inches wide, 6 inches deep.

Wisconsin plow No. 28½. Length of beam 4 feet; length from point to heel, 3 feet 1 inch; length of landside, 2 feet 5 inches; width of cut, 10¾ inches; width of heel, 9 inches; work performed with 22 furrows, 5 inches deep, well turned, slightly lapped. Trial with dynamometer, draught 450 pounds; furrow 12 inches wide, 5 inches deep; two other furrows, one 4½ inches deep, another 6 inches deep, 12 inches wide.

Fourth, the Morris plow, from Bloomfield, Essex county, N. J. Length of beam, 4 feet 2 inches; length from point to heel of mould-board, 3 feet 5 inches; length of landside, 2 feet 8 inches; width of cut, 9½ inches; width of heel, 10½ inches; good-shaped mould board. This plow performed its work of 17 furrows, 6 inches deep; furrows well turned, and matched pretty well for a new and rough plow. Trial with dynamometer, draught 600 pounds; furrows 12 inches wide—part of them 5 inches, the other part 6 inches deep.

Fifth, the Scotch plow, all iron, dimensions not taken; work performed with 25 furrows, 6 inches deep, lapped strong at an angle of about 50 degrees; turned smooth. Trial with dynamometer, furrows 12 inches wide, 6½ deep; draught 500 pounds.

Sixth, the Conklin plow from Peekskill. This was a new plow, untried. Length of beam, 3 feet 11 inches; length from point to heel of mould-board, 3 feet 2½ inches; length of landside, 2 feet 5 inches; width of cut, 8½ inches; width of heel, 9½ inches; mould-board very twisting; landside falling over on the land at an angle of about 10 degrees; cast-iron cutter attached to the point, corresponding with the angle of the landside. Work performed with 18 furrows, as near as I could count them, about 5 inches deep. The quality of the work I believe answered the expectations of all but the owner of the plow. I hope his exertions may meet with better success at another trial. The land allotted for this and the Geneva plows was stony and rough, giving the other plows a decided advantage over them.

Seventh, the Wheel plow, from Geneva, N. Y. Length of beam, 3 feet 7 inches; length from point to heel of mould-board, 3 feet ½ inch. No regular landside: has a wheel about 1 foot in diameter, which is designed to substitute the landside and lessen the friction. Cut, 9 inches; width of heel, 8¼ inches. This plow performed its work in a very bad manner, with 21 furrows, 7 inches deep. The mould-board is in good shape; the defect is in the want of a landside, for which the wheel is a poor substitute. Trial with dyna-

mometer, draught 500 pounds; furrow 6 inches deep, 12 inches wide.

Eighth, Eastman's Self-Sharpener, No. 10. Length of beam, 3½ feet; length from point to heel of mould-board, 3 feet ½ inch; length of land-side, 2 feet 1 inch; width of cut, 11 inches; width of heel, 10 inches. This plow performed its work with 22 furrows, 5½ inches deep. Soil, gravelly loam, with very little sward. The mould-board being short and turning quick, gave the work the appearance of old ground or stubble plowing. This plow took the first premium for the best plowing. Trial with dynamometer, draught 450 pounds; furrows 5½ inches deep, and 12 inches wide.

The plow that took the second premium for best plowing was one of Bergen model; for description of which see Bergen plow. Trial with dynamometer, 400 lbs.; furrows 6½ inches deep, and 12 inches wide. The land on which this plow worked was gravelly, with but little sward. In a strong sward and heavy soil, it would make handsomer work than the plow that took the first premium.

There were two plows exhibited by Mr. Finch, of Peekskill, N. Y. Very good models, strongly made, and well finished. I am sorry to find that I have not the dimensions of them. The work of No. C, was performed with 20 furrows, 6 inches deep, lapped very little, and well turned. Trial with dynamometer, draught 450 lbs.; furrows 6½ inches deep, and 14 inches wide. After measuring the width of furrow for each plow separately, I found the result as above given. I then measured the 12 furrows together, and found them to measure 12 feet and 3 inches, varying but 1 inch in the 12 furrows for the measurement as taken separately.

There was one of Prouty & Mears' central draught-plows on the ground (sod C), and I am very sorry that it was not put to work, as it is a favorite plow at the east, and hard to beat anywhere. I think it is better adapted for all kinds of soil, rough and smooth, stony and free, than either of the plows which took premiums. Its dimensions are, length of beam, 4 feet; length from point to heel of mould-board, 3 feet ½ inch; width of cut, 11½ inches; width of heel, 11 inches.

I saw one of the Livingston county plows at Niblo's, but it was not taken over to Paterson. It is a favorite plow in western New York, and has taken numerous premiums; it should have been tried here. Tuesday morning I observed that a new plow had been sent in by B. M. Freeborn, fitted up with one of Wotters' patent adjusting plow-stocks. It is so arranged as to alter the pitch of the stock of the plow behind, which is a matter of very little importance to the farmer; for if the manufacturer of plows adjusts the stock or beam as well as he can when the plow is made, the farmer can give it all the variations it will require, by altering the chain, which is a much cheaper and more simple mode than by the use of the new adjusting stock.

One word on the trial with the dynamometer at Paterson, and I will close this already too lengthy communication. The trial in question I do not consider at all satisfactory, although the committee did all in their power to have it right, and the instrument appeared to be a tolerably good one. The committee were pressed upon from all sides, with 200 or 300 persons anxious to see the operation of applying a scale to test the power required to move the plow, which precluded the possibility of the committee arriving at any degree of accuracy; and the crowd treading on the ground, made it very hard, rendering it more difficult to plow, which increased the disadvantage, that each successive plow labored under in point of draught as the trial progressed. The only way to test the relative merits of the different plows in point of draught, is to put the business in the hands of a practical committee, and have no one present at the trial, except the committee and plowmen.

Mr. Meigs of the American Institute now addressed the assembly in his usual happy vein; the bands struck up a triumphant march, when all formed in and returned to the town. Here mine host of the Passaic had an ample repast spread out, and the whole company sat down to the entertainment, with appetites made keen by nine hours' fasting, and the exercise and excitement of the occasion.

At 6 o'clock we left the Paterson depot, and arrived safely in this city, highly pleased with the excursion. It was a joyous day, joyous company, and a joyous fete.

Cattle Show.

This took place at the Vauxhall Gardens, entering from the Bowery, near Sixth street. It is an excellent place for a show-ground, and commodious to all. The stock was well provided for with stables, sheds, and pens; and the weather proving very fine, it went off with great spirit. There were 78 head of neat cattle entered; 9 buffaloes, caught at the foot of the Rocky Mountains; 8 horses, 1 jack, 1 jenny, and several pairs of mules; 73 sheep; 37 swine; and geese, ducks, fowls, and other kinds of poultry, *uncountable*.

Cattle.—The number of these was not as great as we have frequently seen here, but they were of *far superior quality* to any exhibition of the American Institute which we ever witnessed. The show of Short-Horn bulls was especially good, and we doubt whether it was ever beaten at any meeting of the State Agricultural Society. It was quite gratifying to see such an improvement, and we could not but contrast the majority of the cattle present at this time, with the miserable raw-boned, ill-bred natives and mongrels, which always seemed to rise up like Pharaoh's lean kine on these occasions, to the horror and ridicule of every admirer of fine stock present. *Raw hides* and *coarse bones* seem at last to have given up the contest, in this city, to *good beef* and *tallow;* and

have been taught at length to their dismay, that they can not contend with them. We have not much sympathy for them in their utter defeat—it can not be helped, and we trust it may teach their owners to adopt some means for their improvement hereafter.

Herefords, there were none present; of Devons, not a pure-bred one to our knowledge. The balance was an odd mixture, of which we thought the crosses of the old Dutch blood the best, so far as milking properties were concerned. The one entered by Alderman Peters is an excellent cow in this respect, and not a bad one in some others. Mr. Emmet's cow, Celeste, attracted much attention, as she gave upward of 30 quarts of milk of a good quality per day, then on the ground. Fat cattle, there were none present, at which we were quite surprised, as there is usually a pretty good show of these. The working oxen were few in number, but of a good quality. We particularly admired a beautiful pair of red cattle from New Haven, Connecticut. Mr. Van Winkle's brindle cattle, which won the first prize at the Plowing Match, were present, and all these yoked up, with several pairs of the buffaloes, made quite a team for display.

Horses.—Some of these were very fine, yet nothing like the number we usually have on these occasions. There was one present 40 years old. He can go 4 miles an hour comfortably. Dr. Pool's Spanish Jack was there, one of the largest in the United States, and a capital specimen of his kind. He is full 15 hands high, and has a bray and ears in proportion.

Sheep.—These were a good display, especially in the South-Down and Long-Woolled breeds. The former and their crosses are getting into great favor in this vicinity, on account of their *superior mutton* qualities. Some of the Leicesters present were unusually large. Mr. Thomas Dunn of Albany, showed one which weighed 301½ lbs. We have seen at his farm those still heavier, if we recollect right, one weighing 334 lbs.

Swine.—The grunters turned out in considerable force and variety, Berkshires, Woburns, &c. The former seemed to attract the most attention. One beautiful little white creature was present, called the Mocho breed, but in fact is a white Chinese. She was extremely fine, and as fat as a corn-fed coon; and she kept as quietly coiled down in her corner, as a young cub stowed away in a hollow log for a winter's siesta.

Poultry.—The birds were a better show than we have ever seen; and among them we noted the Chinese, Bremen, wild, and mongrel geese; Muscovy and other ducks; Dorking, Poland, Pheasant, Bucks county, Egyptian, Chinese, and other fowls. Among those entered was a hen said to lay two eggs per day, and another with four legs, which a bystander anticipated would lay *three*. Some enormous capons were shown; also a red flamingo, and a curacoa, a curious bird something like a half-grown black turkey.

After the Show was over, a considerable number of sales were made at fair prices, and more would have been effected, had it not been announced by Mr. Miller, that a sale at auction would take place the next day. With this the American Institute had nothing to do, and their officers publicly disavowed any sanction whatever of it; but as their contract for the Gardens ended on the evening of the *second* day of the Show, of course they had no control in the matter, and if parties chose to sell on the *third* day, they could not help it. Considerable dissatisfaction was expressed by those who did not wish to sell their stock at auction, and we are authorized by the officers of the Institute to say thus much to free them from any blame in the matter. We look upon the auction system of sales upon an occasion like this as *decidedly bad*, and the stock-men ought to put their faces against it. Fair sales we believe never have been made under the hammer at the show-yard, and we are free to say that they never will be; the moment animals are thus put up, gentlemen at once become shy to purchase, and will not bid with half the confidence and liberality as at private sale. It is much better for the contracting parties to meet each other face to face, and make their own bargains; and it is the intention of the Institute to engage their grounds for three days another year, so as to give those time enough, bringing stock here, to conduct their sales in a private way. In attending the different agricultural shows this season, many things have occurred to us which, if adopted, we are satisfied would be a great improvement. We shall revert to this subject hereafter.

Address of the President.—Friday the 27th, the show closed by reading the awards of the different competitors, and an address from the President of the Institute, General Tallmadge. We wish we could publish this able matter-of-fact document; but for want of space are obliged to forego doing so. It will be found, however, in our city papers. It was listened to by a very large and crowded audience of ladies and gentlemen, who expressed their approbation of the sen-

timents of the distinguished speaker by repeated cheers. The President represents the Institute as in a continued prosperous state, and showed conclusively the beneficial effect of its working on the Agriculture and Arts of the country, and the necessity for the sake of our independence, comfort, and happiness, of increasing and sustaining the great interests of the nation.

The officers of the American Institute have been indefatigable in their exertions throughout the Show, to make everything as agreeable and convenient to the exhibitors and spectators as possible, and they certainly deserve the thanks of the community for their untiring attention. We shall give a list of the premiums in our next. They could not be correctly prepared in time for this No., and we are anxious to have them as complete as possible when published.

THE WILD GOAT.—(Fig. 55.)

The Ibex or Wild Goat is a native of Asia, and inhabits among the rocky precipices of the highest mountains by day, and descends to the woods and valleys to feed at night. It is very timid and shy, and congregates in small flocks. The horns of the Ibex are said to be frequently three feet in length. There are two kinds of hair upon it; the outer, long and coarse; the inner, shorter and fine almost as silk. Both qualities are manufactured into different kinds of cloths. The flesh of this goat is delicate, and on this account and its shyness, it is followed by the hunters with great pertinacity. Its habits seem to be much the same of the Rocky Mountain sheep or goat of our own country. We have never heard of their being domesticated. It would be curious to trace the analogy between the Wild Goat and tame, and the causes of their different modifications of appearance, supposing them descended originally from the same stock.

ORANGE COUNTY BUTTER-MAKING.

Goshen butter, made in Orange county, this state, is celebrated the world over as being equal, if not superior, to any other produced in the United States. It undoubtedly owes its reputation in a measure to the careful manner in which it is made; the food of the cows, however, from which the milk is concocted, has something to do with it, as the pastures in the best districts of Orange county abound with sweet grass and white clover, which unquestionably are great requisites to ensure sweet butter. We took the opportunity during two recent trips to this county, to visit several of its dairies, and make ourselves as well acquainted with the process of butter-making here as our time would allow. Those the most complete which passed under our inspection, we found upon the farms of Frederick J. Betts, Esq., of Newburgh and General Wickham of Goshen. As we took full notes of the latter establishment, our description will apply more particularly to this.

The cows are regularly salted and kept in good pasture during summer; in the winter, each one by itself in a stall, with a separate door to it, in a building forming two sides of a square, round a large commodious yard. The lower story of the barn is appropriated for the stables, the upper part for hay and fodder. General Wickham has several dairy establishments; the most perfect is that within two miles of Goshen, numbering 40 cows. These are brought up to the yard night and morning, and regularly milked. The outer paling of the yard is distant only about 50 feet from the farm-house. Here, right opposite the farm-house, is placed a tunnel, into which the milk is poured as fast as a pailful is obtained from the cows. A short perpendicular tin pipe connects the tunnel with a horizontal one, which is buried two feet under the ground out of the way of the frost, and

leads into the cellar of the house. When the milking operation is going on, a woman stands in the cellar with empty pans placed under the end of this horizontal tube, which, as fast as filled, she sets away upon the cellar bottom. Here the milk stands till it becomes loppered and soured, as it is said to make more butter in this state than in any other, and of a better quality. It is now poured, cream and all into the churns, which hold about one barrel each. If the weather be cool, and the milk not sufficiently warm to come readily, a can is filled with hot water, and this is placed in the milk in the churn, and stirred about till it reaches a temperature of from 55 to 60 degrees. A small water-power is now applied to the churns, the handles of which are moved up and down on the same principle as in Fig. 53, No. 8, of this periodical. Where water-power can not be had, a dog, goat, calf, or sheep is used; and the best power for an animal is Fig. 54 of the present No. Water-power, however, is to be preferred, as it is the most steady, and according to the good housewife's notion, who certainly ought to be authority on these subjects, it produces the best butter. When the butter has come, the power is stopped, and a pump is rigged into the churn; the handle of this instrument is then attached to the power, and the butter-milk pumped up into a reservoir just outside of the cellar, standing on a level with the ground. From this the butter-milk is conducted by means of a tin pipe about 100 feet to another reservoir close by the piggery, from which the milk is dipped out in buckets, and fed to the pigs; so that everything almost, moves of its own accord or by water, from the moment the milk is drawn from the cows in the yard, till it is churned into butter, and the butter-milk is concocting itself into pork from the pigs' stomach. The whole expense of laying down these tin tubes is but trifling. The expense of building a water-wheel, and bringing the water to it is greater or less according to one's position; but when a dairy of 40 cows is kept, it is well worthy of being adopted if not too costly.

After churning, the butter is thoroughly washed off with cold water; if this be not done, it is difficult to get the butter-milk clean out of it. As soon as cool and solid, the butter is taken on to a marble or smooth stone table, properly salted with clean, fine salt, and worked over thoroughly with a wooden ladle or spatula. The hand is never allowed to touch the butter, as it is warm, and softens it. After being thoroughly worked, half, or full firkins, made of white oak staves, (the latter holding about 85 pounds, and the former 40 pounds,) are used for packing it. Previous to packing, the firkin is well washed inside with cold water, and then rubbed all around with salt; the butter does not then adhere to the sides of the keg, but comes off clean when wanted to be taken out for table use. It is put down in layers as churned of three or four inches deep. When the firkin is full, a linen cloth is placed over the top of the butter, on this about half an inch of salt, to which a little water is added so as to form a brine. The firkin is now headed up and sent to market. Mr. Betts thinks if the butter be destined for shipping, stone jars with covers would be preferable to firkins for packing, and his opinion coincides with our own.

In butter-making, a good cellar is a very important consideration; indeed, without one, it is almost impossible to produce good butter. The cellar should be about 7 feet deep; 18 inches of which should be above the level of the ground, for the purpose of having windows in it for ventilation. These should be open at all times, and instead of glass be made of fine wire-gauze, stretched across the apertures. This prevents the entrance of the smallest fly or gnat, and yet is no hindrance to the air. The walls ought to be of stone, and pointed; the bottom of stone slabs or cobble stone, thickly plastered with water cement. Made in this manner, neither rat, nor mouse, nor any other vermin can find entrance; and the butter, and cream, and milk, are perfectly protected.

General Wickham's farm-house is one of the nicest cottages we have lately viewed; with a pretty yard in front, studded with flowers, and embosomed in shrubbery. The piggery, barns, stables, and yards, are also very complete; and they all stand close by a wild little stream that runs babbling on in its clear full course over a pebbly bottom to the noble Wallkill. Altogether it is one of the prettiest models of a dairy establishment we have ever seen, and a young friend of ours, who accompanied us to inspect it, quite forgot his own handsome cottage and fine farm, in admiration of that of General Wickham's.

In a future No., we shall take up the milk dairies of Orange county, and give a description of the method of preparing and sending it to this city for sale. We shall also have many particulars to relate hereafter of farms which we visited there, course of cropping, stock, and other matters.

This county is unsurpassed in some respects, and in consequence of its contiguity to a city market, its course of agriculture varies considerably from those portions of the state more remote.

BREEDERS' CONVENTION.

About forty gentlemen met on Tuesday evening, at 7 o'clock, October 17th, at the Repository of the American Institute, agreeably to the circular of the Committee of the New York State Agricultural Society, of June last, to form a convention of breeders, to take into consideration the establishment of some fixed scale of points, which shall form the criteria of the best animals of the different breeds of domestic cattle.

The convention was organized by appointing Mr. Bement of Albany, chairman.

A motion was then offered and adopted, that the chairman nominate a committee of three, to select officers for the convention. The following gentlemen were appointed for this purpose:—Messrs. Prentice, of Albany, Watson, of Connecticut, and Randall, of Massachusetts, who reported—Dr. John A. Pool, of New Jersey, President, Jacob C. Parsons, of New York, Secretary. The above nominations were confirmed by the convention.

The convention being called to order by the president, the secretary was desired to read the Circular setting forth the object of the convention. Mr. Prentice of Albany then offered a few remarks, stating the importance of a knowledge of the distinguishing points of excellence of the different breeds of cattle. He was followed by Mr. Watson of Connecticut, on the same subject, advocating the great superiority of the Short-Horn breed. He finished by reading a paper detailing the points necessary to constitute a superior animal. Mr. Allen of New York, then rose and spoke in general of the points necessary to constitute good animals of all kinds, and named these to be, 1st, a deep wide brisket; 2d, a general fineness of bone, hair, skin, and small offal; 3d, good handling. He then mentioned several minor qualities, which he also considered essential. In size he thought animals should differ in different sections of the country, according to the quantity of food to be furnished in the pastures, &c., and that the points constituting a good feeding animal, were essentially the same the world over; he did not care whether it was a horse, ox, sheep, pig, bird, or fish. Mr. Bement of Albany next followed, reading a paper containing his views on the subject in question, and pointing out emphatically the necessity of a standard in a detailed scale of points, in order to judge understandingly of the merits of cattle.

A resolution was now offered and adopted, that committees be appointed to report scales of points, which should constitute good animals of the various breeds. Messrs. Prentice, Bement, and Allen, were appointed the committee on Durhams; Messrs. Corning, Sotham, and Pumpelly, on Herefords; Messrs. Allen and Colt, on Devons; Messrs. Randall and Watson, on Ayrshires; and Messrs. Jacques, Field, and Starr, on native cattle. The above committees were directed to report at the next meeting of the convention, which was adjourned to be held at the same place, at 7½ o'clock on Wednesday evening.

Wednesday, October 18th.—The convention being called to order by the president, the Reports of the several committees were decided to be submitted. That on Devons was first called for; but the committee declared themselves unprepared to report. Mr. Pumpelly then presented a report on behalf of the committee on Herefords, which was read, accepted, and reported to be placed on file. Mr. Randall now offered the report of the committee on Ayrshires, which was read, accepted, and ordered to be filed. Mr. Bement, on behalf of the committee on Short-Horns read the following report:—

After mature reflection and consultation, your committee do not feel prepared to make a report upon the scale of points which shall be considered as constituting a perfect animal; they therefore propose, that the subject be adjourned for consideration till the next fall meeting of the N. Y. State Agricultural Society, or of the American Institute. In coming to this conclusion, the committee hope that it will be no bar to any gentleman expressing his opinions on the subject in question at the present meeting, trusting thereby that a foundation may be laid for an *enlightened* discussion and decision next year.

C. N. Bement,
E. P. Prentice,
A. B. Allen,
} *Committee.*

The above communication was received and ordered to be filed. The committee on native cattle made no report. Mr. Sharwood of England then rose, and offered a few remarks on the necessity of adopting a scale of points for animals. Considable informal conversation now took place, when the convention adjourned to meet at the same time with the New York State Agricultural Society, on the 3d Wednesday of January next.

We look upon the establishment of a scale of points, which shall be considered as constituting the criteria of the best breeds of domestic animals, as a very important one; and we hope that it will be *well considered*, and that nothing *crude* may be put forth as a guide to the public in these matters. Such a report ought to be accompanied with casts of the animals as a whole, and then in separate parts, both inside and out, to elucidate the

subject in full, with all the different points numbered and explained. If we do anything *less* than this, we shall only be repeating what is already as well said in British periodicals as can be. For our own part, as the attention of British breeders is now particularly called to this subject, we would prefer first seeing a report from them. They have more knowledge and experience than we, and more time and wealth to bestow upon it; and after seeing what is done in Great Britain, we shall be prepared to act more understandingly in our own country. We do not say that their criteria should be ours entirely; our climate and wants demand something varying, perhaps, from any part of Europe; and when we have seen what the science of Great Britain decides as constituting perfection, then we can adopt it with such modifications as shall be considered necessary for the different sections of America.

NEW YORK FARMERS' CLUB.

The regular monthly meeting of this Club took place at the Pacific Hotel, on Tuesday, the 26th of September, General Johnson in the chair. Several of the members being absent, attending agricultural shows in the country, there was not so full an assemblage as usual. A desultory conversation ensued, and some specimens of fruits and grain of different kinds were shown. Dr. Field then read a paper on the beneficial effects of muck, as applied to Indian corn and other products the present season, on his farm in Dutchess county. We hope to be favored with this paper for our columns hereafter. Other communications were read on various subjects by Messrs. Dey, Meigs, and Wakeman. Those of the last-named gentleman we subjoin, and Mr. Meigs' account of Mr. Maxwell's farm shall appear in our next.

Egyptian Corn.—T. B. Wakeman, presented a stalk of the Egyptian corn, bearing the ripe grain. It was deposited by Mr. James de Peyster, Long Island, with the American Institute. Mr. De Peyster has cultivated this kind of corn for several years; first, in Columbia county, since, on Long Island. He thinks it should be treated as Indian corn, except planted in drills close together. Less attention is required than with Indian corn. It is not as much affected by frosts. His crop has never failed, but the heads he thinks have grown larger. His practice has been to apply a little ashes in raising it. He thinks on good ground one hundred bushels may be raised on an acre. Fowls are remarkably fond of it. He has made it into cakes, which were excellent. The stalks from Mr. De Peyster bear a plumper and larger grain, than any which have been shown at the Institute. It has been suggested that on experiment, it has been found, when cut for the purpose of feed for cattle, that it grows up again more rapidly than Indian corn, and appears to be less injured by being treated in this way. It was permitted to grow about two feet high before cutting. Mr. De Peyster has never made trial of it for feed, when cut green in this way. It is recommended that some one make the experiment by sowing it broad-cast, as is the practice with Indian corn, and learn the results.

Its hardy character in resisting frosts, and its abundant yield, added to its ready growth after being cut for fodder, as a substitute for grass, are considerations that recommend it to be effectually tried by our farmers.

South American Potato.—The gentlemen of the club will remember, that about the middle of June last, a vegetable was shown here resembling a potato, said to have grown on a vine—one of five received by General Tallmadge from South Carolina. The original seed was obtained from South America, where it is said this vegetable is used for food. One of these potatoes, so called, was given to the gardener of P. S. Van Rensselaer, Esq., who planted it the 20th of June. On the 16th of September I was at Mr. Van Rensselaer's place, in Dutchess county, and examined it. It was growing, to all appearances, vigorously, and had attained about 15 feet height, and had been turned down, by Mr. Van Rensselaer's direction, to enable the gardener to remove it into his greenhouse, in case it did not come to maturity before frost; and for that purpose it had been planted in a moveable base. The full length of the growth was at that time, 16th September, 18 feet, having grown about 3 feet after it was turned down.

This potato resembles the Lima bean—heart-shaped leaf, joints about one foot apart, and a sprout from each joint. Small nodes had formed on the joints, indicating the commencement of the formation of fruit, and a few small blossoms were discoverable at the top.

The other four potatoes were distributed to Messrs. Lenox & Sheafe, of Dutchess county, Mr. Brill, Jersey city, and Samuel Stevens, Esq., of Astoria, Long Island. It is hoped we shall have full reports from each of these gentlemen at a future meeting of the club.

On account of the Show of the American Institute the past month, the Club has had no meeting, save a festive one for a dinner the 25th October. Other engagements prevented our being present on the occasion. We understand, however, that it was quite an intellectual feast, with the usual accompaniments of toasts and speeches. The regular meeting for the discussion of agricultural subjects will be resumed the present month.

ERIE COUNTY AGRICULTURAL SHOW.

The Third Annual Show of the Erie County Agricultural Society, was held in the city of Buffalo on Tuesday and Wednesday the 10th and 11th October, and we are indebted to the Commercial Advertiser for a full report of the doings thereof.

The weather was unpropitious, yet we see that the entries of articles were far more numerous, and the amount of money received from the farmers for membership much greater, than at any previous Show of the Society—this is gratifying. We have given such long lists of premiums of the State Agricultural Society, and the county societies are so numerous, that it must not be expected of us to copy them hereafter. We shall be obliged to confine ourselves merely to a report of new and interesting facts, and such extracts from addresses as strike us as best calculated to advance the general cause of agriculture. Dr. Lee's address was of a high order. We subjoin an extract, showing the great value of charcoal as a manure, and the facility of augmenting the crop of wheat to an average of 50 bushels per acre, under an improved system of cultivation.

I have stated to you that most plants require, in addition to water and carbon, a portion of nitrogen. This also comes from a gaseous substance in the atmosphere. Although nitrogen forms the largest element in the air, (79 per cent.,) yet it has been pretty well settled that plants do not obtain their nitrogen by decomposing common air, but derive it from ammonia, which is furnished to the atmosphere in great abundance by a world of decomposing vegetables, and animals. It is the ammonia that escapes from putrefying substances that causes their offensive smell. Now, again, comes up the practical question: How are we to collect this highly volatile gas, and transform it at the cheapest rate, into wheat, beans, cheese, and wool, of which it is an important element? Rain water has a strong affinity for ammonia—which is a compound of 14 parts of nitrogen and 3 of hydrogen. Water at 50° will absorb 650 times its bulk of this vegetable food. Every rain, then, brings considerable quantities of it to the ground. It is the ammonia in rain water that imparts to it its peculiar softness in washing the hands or clothes. It is the ammonia in snow that makes it valuable as a manure; and it is the ammonia in rain water that causes it to putrefy in some degree, like an animal substance, when water is permitted to stand in warm weather in a close vessel above ground. The first fall of rain after a long drought is much the richest in this gas. Being extremely volatile, it escapes into the air again after a warm shower much quicker than water evaporates. What then will aid the cultivator of plants, and seize this volatile ammonia, as lime does carbonic acid, and hold it permanently about their roots, in such a shape that it will feed them all they need, and no more? For an excess of this stimulating alkali, like an excess of salt in our food, will destroy life instead of supporting it.

Common charcoal is the cheapest, and therefore the best material to apply to cultivated fields for this purpose. It will absorb 90 times its bulk of ammonia, and will give it out slowly to the vital attraction of the roots of plants. Most of you know that charcoal will correct the taint in meat—will purify rain water in a suitable cistern, so as to render it the purest water for culinary purposes. Such charcoal should be often renewed in filtering cisterns, and when saturated with ammonia, is an extremely valuable manure. The liberal application of this well-known substance to the wheat fields in France, has mainly, in connexion with the use of lime, added within the last ten years 100,000,000 bushels to the annual crop of wheat grown in that kingdom. The charcoal should be sown in May, at the rate of 75 bushels per acre, well pulverized. This subject is one of vast practical importance. By studying the science of agriculture, you may grow fifty bushels of good wheat on any acre of your land, I have good reason to believe, every year, bating of course extreme casualities.

You all know that a single kernel of wheat, will, sometimes, when its fecundity is highly stimulated, send up 20 stalks, and that each stalk will bear a head containing 100 kernels. Here is a yield of 2,000 fold. Nature then has rendered it practicable to harvest 2,000 bushels of good wheat from one bushel of seed. The most skeptical among you will not deny that 2,000 kernels have been produced from one kernel, and that the same natural causes that produce such a result in one instance, will ever operate, at all times, under like circumstances, in the same manner. Hence, it is but reasonable to say, that nature is quite as willing to produce 50 bushels of good wheat on an acre of ground every year, mark me, *if her laws be obeyed*, as she is to grow fifty bushels of weeds every year on the same ground.

The Peach-Tree Worm.—This worm can be destroyed by growing the tanzy, wormwood, or any bitter plant or shrub, around the peach-tree. A dozen sprouts or so are quite sufficient for protection, and it is best to set them out in the spring of the year. Saltpetre mixed with salt at the rate of two ounces of the former to one pound of the latter, and spread around the trunk of the tree, will destroy the worm, and prevent the yellows. Verdigris mixed with oil and poured into the holes and then plugged, we have seen also recommended. This is said to be certain death to the worm, without danger of injuring the trees. Notwithstanding this assertion, we should be very careful in the use of verdigris.

Inaccuracies.—We are glad to see that our Barclay street neighbor, the Spirit of the Times, has taken up this subject. In its columns of the 28th October, after expunging the terms "Old Sir Archey, Old Eclipse," and "sired by," it says: Many write "foalded" for *foaled*, "tract" for *track*, (*course* is a still better term than *track*,) "sorrel" for *chesnut*, "full brother or sister" for *own* brother or sister, "blooded" stock, for *blood* stock, "put to" for *bred to*, "raised," when applied to horses, for *bred* or *reared*. We hope the Spirit will continue its "greetings" in all these matters, for no one is more *au fait* or more capable.

BERKSHIRE SWINE.—*Errata.*—On page 201 of this paper, the first premium on sows was erroneously given to L. F. Allen, instead of R. L. Allen, of Buffalo. We are not to blame for this error, as it was copied from the Rochester Democrat, containing the only report of premiums in our possession at the time we went to press. The New Genesee Farmer has the same error, which it should correct. We put the matter right in No. 8, page 233 of the Agriculturist. The boar belonging to Mr. Hills, which took the first premium, was a Berkshire, and in fact no other breed had any chance with them. In conclusion we would say, that R. L. Allen has a very superior lot of Berkshire breeders on his farm, imported for him, by us, directly from England, and he will supply choice pigs of this fine stock at fair prices.

DEVON CATTLE.—*Errata.*—In Mr. R. L. Allen's report for this paper, of the late N. Y. S. Ag. Soc. Show at Rochester, page 199, the word "Devon" was erroneously printed "Down." The Devons exhibited on that day were a very choice lot from recent importations, and principally owned by Messrs. E. P. Beck, of Sheldon, and L. F. Allen, of Black Rock. They are of large size for Devons, fine in their points, and possess deep-milking qualities, and would have taken a good share of premiums, had they not very improperly been classed with Short-Horns, instead of being permitted to stand as a class of their own breed. As it was, Mr. Beck took two premiums, and Mr. Allen one, against the Durhams, in classes II., III., & IV. of bulls. We hope that Durhams, Herefords, and Devons, may be classed by themselves another year; and that animals of any breed, pure or mixed, may also be classed by themselves; for it is not fair to pit animals against each other, so totally distinct in appearance.

LIST OF PREMIUMS AND REPORTS OF THE N. Y. S. AG. SOCIETY.—We trust that our readers will not think these too long. They are now finished for this year. The reports of the committees are valuable, and we are sure that they will be read with interest. That on Plows, page 282 of this No., is admirable—the very best within our recollection; and for one, we feel under obligations to the committee for giving the society so thoroughly practical a document. It ought to be widely copied. Mr. Cornell, page 259 of this No., has also furnished an excellent paper on plows. Our southern correspondents will find many of their former questions to us answered in these reports.

FAIR, SHOW.—It is improper to use the word FAIR in the sense that we do, as applied to the SHOWS of Agricultural Societies. We were several times corrected for using this word improperly in England. "Fair," said a gentleman to us one day, somewhat contemptuously; "this, sir, is a Show." We are determined to abandon the use of the word in this periodical hereafter, as it is now generally applied in the United States. A FAIR, is an assemblage or meeting of *buyers and sellers* of stock, or articles of any kind, simply. A SHOW is an assemblage for the *exhibition* of animals, &c., similar to that of the American Institute in this city, the State Agricultural and County Societies, &c. We respectfully ask our brethren of the press to join us in endeavoring to get these words used properly hereafter. We hope, also, that they will join us in the corrections which we suggested in our September No., page 171, second column.

CULTIVATION OF WHEAT IN KENTUCKY.—The Dollar Farmer says that Mr. Wm. C. Williams, near Louisville, has succeeded in obtaining 600 bushels of good wheat from 20 acres of land. *Early* sowing was one of the chief causes of this great crop. He plowed up a rich clover ley, 8 to 10 inches deep, harrowed and rolled well, and laid off into beds 9 feet wide, with deep water-furrows. He soaked his seed in brine, and then rolled it in lime, and used 3 bushels to the acre. We beg reference to our own observations on early-sown wheat, page 129 of the current volume. We do not think September too early for Kentucky.

AGRICULTURAL SHOWS.—A notice of the one we attended at Hartford, Connecticut, and Orange county, this state, as well as some others, will appear in our next.

THE COMING WINTER.—If signs prove true, the coming winter will not be near as cold as the last was, especially at the north. The deep and frequent snows in the latitude of 42° and above, the past month, certainly does not augur very favorably for a mild winter; but we take the summer, rather than the fall weather for our guide; and it is our intention, the ensuing season, to see whether it corresponds with our previous observations, which would make it neither a very cold nor a very mild one.

WOOL-GROWING.—We are glad to see the Prairie Farmer take up the subject of growing wool at the west with such spirit. There is a raciness in its arguments which is quite refreshing. For example: it says that sheep obstinately persist, like the Irishman's pig, to live on the Prairies through the winter, and won't die off to suit the prognostications of those who think this part of the country unfit to grow wool in. How unaccommodating!

THE HERD-BOOK.—Volume IV. of Coate's Herd-Book has just been received from England. It is devoted entirely to Bulls. Volume V. will soon follow with Cows. It is handsomely got up, the portraits of the animals more natural, and in better style than in the preceding volumes. It contains upward of 400 pages.

EXTRA NUMBERS.—We shall issue a number of our paper on the 15th and 1st of each month hereafter, till Volume II. is completed, which will be on the 15th of December next. We trust that our friends will bear this in mind, and favor us with an extra quantity of communications. Volume III. will promptly commence on the 1st of January, 1844.

ORIGINAL CORRESPONDENCE.

Translated for the Gardeners' Chronicle, from the German of Dr. Hugo Mohl.

REVIEW OF LEIBIG'S VEGETABLE PHYSIOLOGY.

(Continued from Page 250.)

Another important point, says Professor Mohl, (p. 37,) which Leibig's theory does not explain, is, that the saline bases absorbed by plants are not only absorbed in the shape of carbonates, (which are easily decomposed by the mere vegetable acids,) but often also in the shape of phosphates, sulphates, &c. According to all experience, these salts are not less essential to vegetation than those bases combined with organic acids. Silica, also, is an ingredient equally essential to the growth of most, if not all plants. Which part these substances take in the vital process, is (says Mohl) almost unknown, unless, indeed, we may presume that the sulphates yield plants the sulphur required for some of their organs. Of the phosphates we know still less; we are ignorant why they chiefly occur in young plants, and in their seed; and we are perfectly ignorant of the quantity required for vegetable growth—for analysis shows that the amount of phosphates varies considerably even in the same organ in plants grown on different soils, as is best seen in the different sorts of grain.

In that chapter which is devoted to the Culture of Plants, Professor Leibig puts forth a regular theory of vegetable nutrition—as far, namely, (observes Dr. Mohl,) as Leibig's unconnected way of writing admits of any systematic arrangement. He again starts from the assumption, that humus can not be absorbed and used as food by plants; for two reasons—one chemical, and the other physiological. He, in the first instance, denies that the humus of vegetable mould possesses the properties ascribed to it by chemists, it being absolutely insoluble in water, and not combining with earth into soluble salts. The latter, he says, may be seen in calcareous caves, whose stalactites, instead of consisting of humate of lime, do not contain a trace of vegetable matter. Dr. Mohl says that he does not intend to settle these opinions, for he has no doubt that chemists will take them up in due time. He merely throws out the following remarks: "It can not be positively asserted that the humates contained in vegetable mould are insoluble in water, because water will dissolve out of the soil a certain amount of an organic, brownish substance—an experiment which can be made with any garden soil; still coal of humus seems to possess the property of subtracting these substances from a solution passing or filtering through soil, otherwise (as Leibig has stated) all our springs would contain brown water. It appears, moreover, that besides coal of humus, the inorganic substances of the soil themselves possess (although in a lesser degree) the property of withdrawing from water the substances dissolved in it—a circumstance to which the greater purity of springs coming from a great depth may be ascribed. Still this withdrawal of organic substances is obviously only a partial one, for our spring-water is never free from organic substances—a fact borne out by analysis, as well as by the putrescence to which spring-water is subject. This perfectly agrees with the new experiments of Saussure, who found in all waters an azotised substance soluble in water." All these facts, therefore, give quite another result from that which Leibig has arrived at, viz., that the water which filters through vegetable mould will always supply plants with some portion of organic matter. How far this substance influences the nutritive process of plants, was the proper question for Leibig to examine, but which he has neglected to enter into. Saussure has, however, made some experiments on the absorption of humate of potash, and the extract of vegetable mould by the roots of plants (Bibl. Univ., vol. xxxvi., p. 340.) Although these experiments do not strictly prove that this *is* really the case, under all circumstances; still they go so far as to prove that it will be the case as long as the roots are healthy, and do not, by their putrescence, yield humous substances to the water. Leibig, in a subsequent refutation of these experiments, ascribes their telling against him to an error of calculation! In another part of this chapter (p. 109) Leibig says that humus, if not properly exposed to the influence of atmospheric air, will form with water a solution of a brown color; but that no plants can grow in such soil, for the humus will consume all the oxygen contained in the air. It is (says Dr. Mohl) quite inconceivable how a man can write such things, when the inspection of any peat moss will show the fallacy of such assertions.

The second argument which Leibig brings forth to support his favorite assertion of plants not feeding on humus, is based on physiological grounds. He first announces as a general principle, that, under the appellation of food, such substances only can be included, as being derived from external sources, can maintain all the vital functions, and which the organs of a plant can use for the formation of the substances peculiar to them. This ambiguous definition includes (says Dr. Mohl) some anomalies, and does not apply to several reputed kinds of food. Starch, for instance, is certainly one of the substances on which man feeds; yet he could not live on it alone. In farther explanation of his views, Leibig adduces the example of a grain of wheat, which contains the necessary ingredients of the germ, and the first fibres of roots; and he adds that we have to suppose that these ingredients are mixed just in the proportion that is required for the development of those organs. If one of the ingredients, say starch or gluten, were superabundant, they would not serve either for the formation of leaves or otherwise. Carbon, also, as well as ammonia and water, are always combined in plants with an azotised matter; and it is for this reason that substances, containing no nitrogen, like gum, sugar, &c., and consequently no humic acid, (which stands next to them in a chemical point of view,) are not used as food by plants, but would rather impede the vital process, and kill the plant. (p. 116.) In analysing this string of assertions, Dr. Mohl observes, in the first instance, that the absorption of azotised compounds as food by plants is a fact doubted by no one; but he doubts whether the

quantitative proportion between the absorption and digestion of azotised and unazotised substances, assumed by Leibig, be based on fact. Leibig says that this proportion must exist in the grains of wheat. But Hermstadt's fine experiments on the different sorts of grain show quite the contrary; for one sort of wheat contains 41 per cent. of starch to 34 per cent. of gluten, while another sort shows a proportion of 65 to 9. But this varying proportion of azotised and unazotised substances also occurs in the organs of vegetation themselves, as may be seen in the roots of beet cultivated on a soil rich in vegetable mould, or in one manured with animal matter. Chemistry, therefore, does not support Leibig's assertions. Indeed, he himself, in some degree, contradicts his own statements, when he says (p. 119) that if plants obtain a greater proportion of carbon than of nitrogen, then the carbon will not be used for forming gluten, or albumen, or wood, nor for any constituent part of an organ, but will be secreted in the form of sugar, starch, oil, wax, resin, mannite, gum, &c.

The assumption (continues Dr. Mohl) that the organs of plants consist of gluten, albumen, and wood, and that other constituents, like sugar, starch, &c., are mere secretions, is decidedly wrong in an anatomical point of view, for the solid substance of all organs consists of woody fibre alone, and all the other ingredients are merely preserved in the cellular substance, &c. The same objection may be raised against the opinion, that starch, gum, &c., preserved in the cells, are mere excrements, and not constituent parts of the organ. On the other hand, Dr. Mohl considers Leibig's opinion, that a greater amount of nitrogen is required for forming woody fibre, than sugar, gum, starch, &c., as perfectly true. This is corroborated by the experiments of Payen, who found in all young organs, while in a state of vigorous development, an abundance of nitrogenous juices, which leads to the conclusion that nitrogenous substances are essential to the development of new elementary organs, a position fully borne out by recent microscopical experiments on the formation of the cellular tissue in plants. If this is the case, we may also assume that the formation of substances nearly related to woody fibre, such as sugar, gum, and starch, requires also a certain amount of nitrogen; and that a less amount, although it may suffice for the abundant formation of those substances, will only produce a small amount of woody fibre, is an opinion adopted by Leibig. It may be also assumed, that if such an amount of nitrogen as is sufficient for the formation of a moderate quantity of woody fibre, is to be divided between the formation of gum and other similar substances, (composed of carbonic acid and water,) and that of woody fibre—the same amount of nitrogen might suffice for the formation of a greater amount of woody fibre, and therefore, for the more vigorous growth of the plant; in those cases where the plant has already absorbed part of its food in the form of substances, which (being composed of carbonic acid and water) have also attained the first degree of vegetable assimilation.

Leibig believes, that, in this case, the function of the leaves will be impaired. This, however, it is impossible to decide, "as we have not even an idea of the variations which the assimilative process may undergo, according to the difference of the substances on which plants feed. It is also, in most cases, less essential to know whether plants absorb only organic substances and water, than whether it is necessarily in conjunction with inorganic matter, that such absorption takes place; in which case, the digestion (Verarbeitung) of inorganic substances would not be suspended; but, in conjunction with this assimilative process, another and different one would make its appearance." To decide on the existence of these processes, it would be necessary to know the metamorphosis which food undergoes in plants. But this is not the case, as we neither are aware of the manner in which gum or sugar are formed, nor of the further changes of these substances into woody fibre. Chemistry, it is true, can change wood and starch into sugar, but only by the application of strong chemical agencies, which we know are not made use of by plants. To imitate the real process is beyond the reach of chemistry; still, it is to this very process that plants owe their growth. Under such circumstances, all that we can do is to make plants absorb organic substances, and to observe the phenomena which their growth exhibits subsequently. It has been shown already that certain plants live only when they absorb organic substances; our cultivated plants prove the same thing, as well as the detailed experiments of Davy and Saussure, which have not been hitherto disproved. The theory of Leibig, therefore, is untenable, and is equally unsupported by experiment, or by exact reasoning on the nutritive processes of plants.

Leibig has himself felt that arguments founded on fact are required for the support of his theory, and he has pitched upon Mount Vesuvius to supply it. He dwells, therefore, (page 131) on the luxuriant crops in the environs of this mountain, in a "soil, which, according to its origin, does not contain the least trace of organic matter, and still is considered as the very type of fertility." We possess, however, no chemical analysis of this soil, derived as it is from volcanic cinders, neither does Leibig say anything on the subject, but merely appeals to its general volcanic origin. But it would be a surprising thing (says Dr. Mohl,) if a soil, on which, for many centuries past, most extensive farming operations (Dreischwirthschaft?) have been carried on, should be destitute of humus. This could be only the case, if, after every few years, it was again covered so deeply with the ashes of constantly new eruptions, that the ancient soil and all its organic matter should be placed beyond the reach of new crops. This, however, we know is not the case, and even such eruptions as do take place at intervals could not effect this. The heaviest fall of ashes (since the destruction of Pompeii) was that of 1822, which amounted on the slope of the mountain to 3 inches, and in the plain from 15 to 18 inches; but this was (according to Humboldt) the treble of any previous fall of ashes. We know, moreover, that even the slightest fall of volcanic cinders kills

vegetation over an extensive area, so much so that one crop among eight near Mount Vesuvius is always lost through such calamities. It is, therefore, these very falls of ashes which cause the formation of a vegetable stratum on a large scale, and such must contain humus. This corresponds entirely with what Mr. Lyell states, ("Princ. of Geol." ii., 148,) that he found near Pompeii under the volcanic cinders of 1822, a layer of vegetable mould of the thickness of three feet.

(To be Continued.)

Mr. Schenck has given us below an account of the most extraordinary butter cow we ever heard of. Yet, notwithstanding this, our readers may rely upon it as being strictly correct. To those who do not know Mr. Schenck, we can only say, that he is one of the most reputable citizens of New York, and not at all likely to deceive either himself or others. We merely make these remarks to silence all cavil. The cow in question is polled, having no horns, and is evidently a three fourths bred Durham. In form, color, and several other characteristics, she exactly resembles animals which we have seen in England, bred from red Galloways by Durham bulls. She is above the ordinary size; with a good spread of hip; a long head; low, deep brisket; handles well; and shows the largest milk veins which we ever saw. Her color is red and white. She was very low in flesh when we looked at her in October, and so lame as to walk with difficulty. We much regret that she could not have been bred to a bull of deep milking family, her stock, then, would have been invaluable.

For the American Agriculturist.

EXTRAORDINARY BUTTER COW.

Matteawan, Dutchess Co., October 6th, 1843.

The cow Emma was nine years old last spring. I got her when a calf from Mrs. Thomas Storm at Kipp's bay. She was from a cow that she had called the cream breed. This is all the pedigree that I can give.

I never till the summer of 1842 kept her milk separate from three other cows which I have, and then, for experiment, I tried it only one week. She then gave 18 quarts per day, and her milk made 15 lbs. of butter. During this time she was kept on grass only. The past summer she received an injury in her spine, and in consequence of this had barely the power to get up, and hardly lived through calving.

On the 21st May I commenced keeping an account of her milk, and the butter it made. She at no time exceeded 16 quarts per day, and on the 10th June, being 21 days, she had made 65½ lbs. of butter of the best quality. This was so incredible, that I could scarcely believe my own senses, although I weighed the butter at every churning myself. I thought I would try again for a day or two. I kept one day's milk by itself, 15½ quarts on the 15th June, and churned it. All the milk was churned, as it appeared to be unnecessary to cream it. I had 3 lbs. 8 oz. of butter ready for the table. The next day it was also tried, and it produced 3 lbs. 4 oz. The first day above, the milk was put in two pans—the other day, only in one pan, which may have made the difference of the quarter of a pound.

In September she only gave 11 to 12 quarts per day, and made 10 lbs. of butter a week—further, I have not tried her milk. She was so lame during this time, as scarcely to be able to move. She was kept on good pasture, and besides this, I fed her night and morning with a bushel of cut hay and 8 quarts of shorts, which is still her regular feed.

Peter H. Schenck.

For the American Agriculturist.

INDICATIONS OF WEATHER.

Buffalo, October 16th, 1843.

"Dost thou know the balancings of the clouds? Out of the south cometh the whirlwind: fair weather and cold, out of the north."—*Job.* "When it is evening, ye say, it will be fair weather, for the sky is red; and in the morning, it will be foul weather to-day; for the sky is red and lowering."—*Matt.* "When ye see a cloud rise out of the west, straightway ye say, there cometh a shower; and so it is. And when ye see the south wind blow, ye say, there will be heat; and it cometh to pass."—*Luke.*

We have high authority for predicting the weather from the appearance of the sky, and it is certain that this has been a leading fancy in all ages and climes. Indeed, so important is a foreknowledge of the approaching weather, especially to the husbandman, that he may well stand excused for paying a very close attention to its indications. These are afforded not only from the appearance of the sky, and the wind, but also by the habits of the larger animals, birds, fish, reptiles, and insects; and how often by the feelings of the human system, as the shooting from a corn, a chronic wound, or rheumatic pains, when an east wind sighs through the trees; and how elastic and bounding do the spirits rise when a fresh northwester comes booming along from the arctic?

The moon, too, has a full share of influence assigned her in changing the face of the sky, and varying the range of the thermometer. It has been estimated that at new moon, when she exerts her influence on the earth in conjunction with the sun, the chances of a change in the weather are as 7 to 1; when in her first quarter, 90° distant from the sun, and when full and in opposition to the sun, the chances of change are as 5 to 2; and when in her third quarter, as 5 to 4. In perigee, when nearest the earth, the chances are 7 to 1; and in apogee, or at the greatest distance, as 4 to 1. That the moon should have some influ-

ence in producing changes in our atmosphere, is very probable. It is certain she causes the tides by her attraction; and it is equally certain, that she produces tides in the atmosphere, which must have some effect on the weather. But what that effect is precisely, who can tell? Where is the manual that points out her influence with any certainty? and of the thousand and one moon-struck philosophers, who are constantly gazing on her placid face, which one of them all, has reduced his observations to certainty or method? We may safely let the moon attend to her own affairs, while we look for some more certain harbingers of change. These signs are in everybody's mouth, though a majority of them are fallacious. We have room only to notice some of the most prominent and best authenticated.

It may be stated as a philosophic fact, that any general change from extreme heat to cold, unless caused by a strong north wind, produces rain. This result is based on the soundest principles of science. For the warm air takes up a large amount of water in the shape of aerial vapor, and this quantity, when the heat is at 100° Fahr., nearly equals 1-20 the weight of the atmosphere. When the temperature falls to 50°, the air can hold but 1-75, so that nearly 3-4 of all the aqueous vapor before suspended must fall to the earth. This effect is briefly and unexpectedly foretold in the sublimely beautiful bursting of the thunder-cloud, as it rolls rapidly over our heads on a sultry summer's day. Electricity is the disturbing cause here, which by suddenly lowering the high temperature of the air, compels it to let go of large portions of water it had abstracted from the surface below, which now comes pelting down, like molten bullets from the sky. In general an east wind will bring a storm, and especially one from the southeast and south. This is rendered more probable when the wind increases considerably, by this means condensing the atmosphere, and compelling it to part with a portion of its vapor. Variable winds produce rain; it also follows a hoar frost. A rainbow in the morning foretells rain in the course of the day; so too, does distant thunder heard at that time. When a storm clears off in the night, rain may soon be expected. There are many appearances of the winds and clouds, which to eagle-eyed observers, as mariners, fishermen, and shepherds, whose situations compel them to a close observance of nature, for their own protection, are so plain that they can hardly be mistaken; but these are in most cases local, and so dependant on seasons and other circumstances, as hardly to justify recording.

In general, when animals are careful in providing themselves with good shelter and warm nests, a storm may be expected; and when they are seen indifferent to their protection, fine weather may be anticipated. Sheep, gambolling in their pasture, foretell a change; and when they lie out openly on some exposed knoll, fair weather may be confidently predicted. In wild animals, these indications are much more distinct and unerring, as they are habituated to rely on their instincts, while the artificial, domesticated brute has been taught to depend almost solely on the reason of his master. Yet the hog, one of the most constant and ancient pets of man, is seen to go round, uneasy, and careful in gathering up whatever straw and waste grass and weeds he can find, and bestowing them in some safe place for a bed during the coming storm.

Birds, too, are remarkable indicators of approaching weather. How they scud to their sylvan retreats when the tempest approaches, and how hushed are their warbling notes, as if afraid to provoke the coming war of the elements! And when the rain is over and gone, with what bounding ecstacy do they again burst forth with their joyous songs, apparently joking familiarly with every passer-by! Foul weather is sometimes betokened by cocks crowing in the evening, or at unusual hours; by ducks and geese flying back and forth, and plunging in the water; by the sea-birds hasting to their hiding-places on shore; and by the swallow and martin gliding over the surface of the ground, or lightly skimming the liquid plain, as they dart for the insects which the excessive humidity of the air has driven to its lowest stratum.

Insects are barometers also. When flies and gnats sting, and are unusually troublesome, cold and wet weather may be looked for; but when they form a vertical column in the last rays of the setting sun, fine weather may be expected.

Spiders are, however, probably the surest indicators of weather. When they are idle and listless, neglecting their tattered web, rain or wind may be certainly anticipated; or if they tie up their nets by strong short filaments, firmly bracing it against the perils it will have to encounter. On the other hand, if they are seen busily weaving a slender web, even if it be then raining, permanently clear weather may be relied on.

The leech lies snugly coiled at the bottom of the water in clear, cold weather, but creeps up to the top on the approach of snow or rain; darts about rapidly before a wind, and seems convulsed on an approaching thunder-storm.

Many plants indicate rain and sunshine by the contraction or expansion of their petals. Among numberless ones these may be mentioned: the beautiful gentianella, the germander speed-well, the African marigold, and especially the "poor man's weather-glass," the pimpernal, (*Anagallis arvensis;*) the purple sandwort, (*Arenavia rubra;*) and the chickweed or stichwort, (*stellaria media.*)

Severe winters are indicated by excessive rains during the preceding summer, by the migration of squirrels, and the early flight of birds of passage. A mild, open winter is usually followed by a late spring, and a severe winter is preceded by an unusually productive and abundant harvest. As a general rule, there is nearly an equal amount of rain and heat in the annual seasons, taking them together as constituting a year, and the years, taking 2 or 3 together, nearly correspond, as to the aggregate of wet and dry, cold and heat, productive and barren. Indeed, so uniform is this rule, that we seldom have two successive years of similar extremes, and three such successive seasons would be a phenomenon.

But Solomon says, "He that considereth the

wind shall never sow;" and it must be confessed that no one of the foregoing indications are invariable criterions of weather. "One swallow does not make a summer," and we have often seen even the wild geese and birds of passage mistaken in their observations. It is only by comparing several of these prognostics that anything like certainty can be attained.

R. L. Allen.

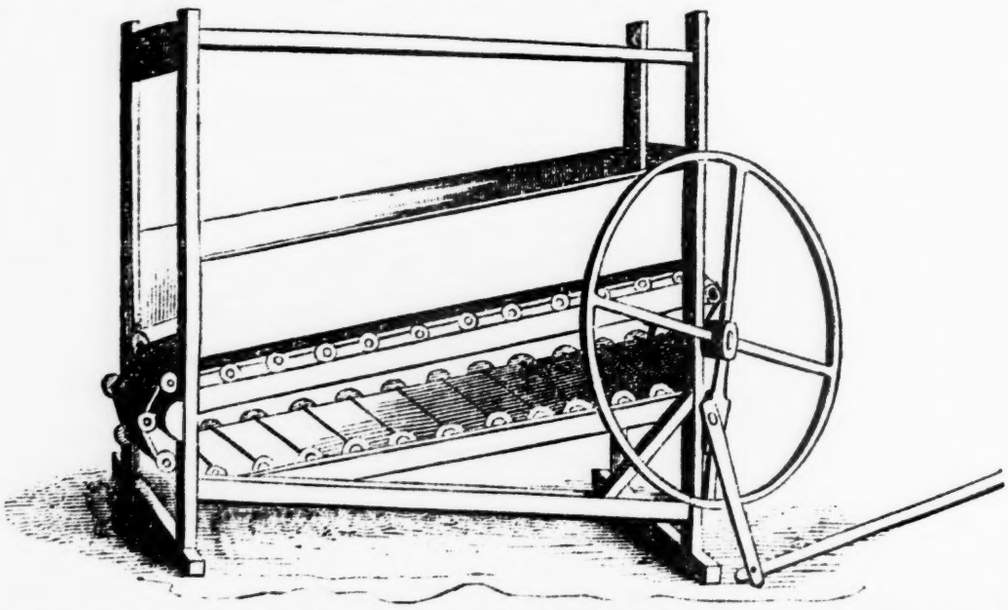
For the American Agriculturist.

DOG-POWER MACHINE.

Newburgh, October 19th, 1843.

Dear Sir: Agreeably to your request, I send you herewith a sketch of the dog or sheep-power machine, manufactured by Thomas Mitchell of this place. One of the machines was exhibited at the late Agricultural Show in this county, as you probably remember, and the committee for its examination, composed of our butter makers well qualified to judge of its merits, gave a very favorable report of it, recommending it as fully equal to any machine heretofore invented; and the society awarded him a premium for it. I have myself seen several of the machines in operation, and am so well satisfied of their superiority over the machines now commonly in use, that I have ordered one for my dairy establishment, in place of the one which I now use. I am certain that they work much easier than our common machines, and as they are cheaper, more durable, and occupy much less room than the others, I deem them more desirable.

Dog-Power Machine.—(Fig. 56.)



The sketch is made for you by Mr. T. M. Niven of this place, and is so simple and plain as to need no description.

Frederick J. Betts.

A friend informs us that he saw this piece of ground previous to plowing, from which Mr. Sotham has raised so good a crop of ruta baga, and that it was literally covered with conch—nothing else did, or could grow upon it. This was all gathered into heaps and burnt, and the ashes strewed over the ground for manure.

For the American Agriculturist.

CULTURE OF RUTA BAGA.

Hereford Hall, near Albany, September 27th, 1843.

I have about nine acres of ruta baga, which I sowed broadcast, and I verily believe it to be the best system of growing them. I have tried every new and *fashionable* experiment, but after all I prefer the old one, when you have men that understand hoeing them, and I can soon teach a person, if he is *willing to work and observe;* the only difficulty is they leave them too thick.

I can grow a greater weight per acre, and my manure is spread regularly over my soil for the succeeding crop. I plowed a piece of sod the early part of last fall, cross-plowed just before the winter set in, leaving it as rough and as much exposed to the weather as possible. Early in the spring, I harrowed it *thoroughly,* raked up all the conch and burnt it. I plowed it the third time the latter part of May, and gave a second dressing with harrows and rakes, and burnt all the refuse. I then put on about thirty loads of good rotten manure per acre, which had been turned in the mine in the course of the winter and well mixed together, and all pernicious seeds decayed. I plowed it under about four inches deep, and sowed the seed on a fresh furrow. They have grown luxuriantly, and are a very profitable crop for a breeder.

Sir John Terril, in answer to Mr. Everett's remarks in England, said the climate would not allow us to grow Sweeds (ruta baga) in America. I say that better Sweeds can be grown here than

in England, under the same culture. I have grown better, and more weight to the acre, and I have cultivated them extensively in both countries, more especially in England.

WILLIAM H. SOTHAM.

The following communication was obligingly handed us by the writer at the time of its date; but getting mislaid it was not found till a few days since. As the interest excited last winter in the Oregon Territory continues unabated, we give place to it, and have also appended other matter on the resources of this country, gleaned principally from Parker's Travels. We have the pleasure of a personal acquaintance with Mr. Farnham, and have also read his travels with much interest. He is a shrewd observer, and so far as we are capable of judging, we do not think that he has underrated the Oregon Territory. But we might as well undertake to stay the sun and moon in their course over the peaks of the Rocky Mountains, as emigration to the west by the hardy nomadic population of our country; and the shores of the Pacific, we have no doubt, will soon become the point of attraction for thousands upon thousands of hardy adventurers. Irving's beautiful descriptions of the wild scenes of the Pacific plains and valleys, and the sublimities of the snowy peaks of the Rocky Mountains, have often made us wish to become a wanderer among them.

For the American Agriculturist.

PRODUCTS OF THE OREGON TERRITORY.

New York, May 20, 1843.

DEAR SIR: A reply to your request that I would give you a statement of the agricultural capacities of Oregon Territory, has been so long delayed, that I scarcely believe you will find anything which I can now write an available apology even for my remissness, and much less a satisfactory answer to the strong desires of our country, to know whether they may or may not find a golden mountain and a vegetable elysium in that territory.

I despair more in regard to the latter than in the former respect, for I believe that one can scarcely put the finger on a date in the history of man, when extravagance in the expectations of the race was more apparent; so that if I should write the mere naked truth, fortified by the observation of every man who has ever resided a twelvemonth in the territory, the desire to prove a garden of beauty "in the far west," to which our restless and energetic countrymen might emigrate, would find quite as much reason and truth in the dreams of their own wishes, and in the romantic representations in Parker's Travels, and Irving's Astoria, as in any statement which would cool the ardor of their pursuit after the ideal fig-bearing, orange-bearing, grape-bearing, wine-flowing soil of the Oregon.

But as you desire to present the mere truth to your readers, the following extract from my travels in Oregon, &c., will answer your purpose.

In order to obtain a correct knowledge of the agricultural capabilities of the Oregon Territory, it is necessary to refer the reader to the accounts already given of its different sections; to the barren valleys of the Saptin and the Columbia above its junction with the Saptin; to the account given of New Caledonia; and the description of that vast tract of deserts dotted here and there with habitable spots, which occupies the space between the President's range on the west, and the Upper Columbia and the Blue mountains on the east. The remainder of the territory, commonly called the "Low country," is the only portion of it that bears any claim to an agricultural character. This is bounded north by the Straits de Fuca and Puget's sound, latitude 48 degrees north, east by the President's range, south by the parallel of 42 degrees north latitude, and west by the ocean; seven degrees of latitude, and 100 miles of longitude; in round numbers 490 by 100 miles, equal to 49,000 square miles; which is equal to about 31,000,000 of English acres. About one third of this may be plowed, another third pastured. The remainder consists of irreclaimable ridges of minor mountains, crossing the country in all directions. To this should be added Vancouver's island, 200 miles long by 30 in average width, and Washington's or Queen Charlotte's island, 100 miles long by an average of 15 miles in width; in both which may be supposed to be the same ratio of arable pasture, and irreclaimable lands, to wit: 1,550,000 of each. And thus we have a rough, but I believe, a generally correct estimate of the agricultural capacities of Lower Oregon; about 12,000,000 of arable and 12,000,000 of pasture land. The arable land of other parts of the territory, it will be recollected, is so inconsiderable as to be scarcely worthy of mention. There are, I presume, 10,000,000 of acres of pasture land in all the region east of the President's range. Thus we have in Oregon Territory, 12,000,000 acres of arable country. And if we assume the territory to extend from latitude 42 degrees to 54 degrees north, and from the Pacific ocean to the main ridge of the Rocky mountains, an average distance of 400 miles, we shall have a total surface of 215,000,000 acres; 32,000,000, the habitable part, subtracted from this, leaves 183,000,000 acres of deserts and mountains.

The climate of Oregon, also, is unfavorable to great productiveness. From October to April the southerly winds blow, and bring upon the lower country daily and almost incessant rains. From April to October no rain falls; and the exceedingly loose soil becomes so dry, that the grasses wither to hay. On the tract lying between the President's range and the Blue mountains, and the Upper Columbia, a few storms fall in the winter months. During the remainder of the year, neither dew nor rains descend upon it; a brown, cheerless waste. But that portion of it which lies near the streams, will furnish in winter and summer the finest pasture for sheep on the continent. And as the weather is too warm in California and the

country farther south to allow beef to be barrelled successfully, and as all the domestic gramniverous animals cut their own food in Lower and Middle Oregon the year round, beef and wool may become profitable staples in that distant territory.

Flax, hemp, and cotton, can be grown in the lower country. There is water-power in great abundance to manufacture them into fabrics for home consumption and foreign markets. Pine and cedar timber promises to be among its most valuable articles of export. Indeed the whole western coast of America, and the islands of the Pacific, New Zealand excepted, will ultimately be supplied more or less with the lumber of this region. The inexhaustible stores of salmon and sardines which frequent the Klamet, Umqua, Columbia, and Frazer's rivers, will constitute another most valuable staple.

Indeed, the agricultural resources of the most valuable section of Oregon, are inferior to those of any of our states or territories in the valley of the Mississippi, and inferior to those of more than half of the territory in the Atlantic states; and Oregon Territory as a whole is, in its soil, the most cheerless and barren portion of the national domain.

Twelve degrees of latitude, and about six degrees of longitude, 800 miles north and south, and 400 east and west, a vast territory; invaluable as an easily defended frontier; as the home of our national and mercantile fleets in the Pacific; and priceless as the termination of a railroad of 600 miles, uniting Puget's sound with the navigable waters of the Missouri, and giving an easy and speedy overland transit for our commerce with China, into the heart of the republic. Its agricultural resources are sufficient for this end; and to this end all its value tends.

THOMAS J. FARNHAM.

New Flax.—The Rev. Samuel Parker in his tour through the Oregon Territory, mentions the spontaneous and prolific growth of flax in that region. He says: "In everything, except that it is perennial, it resembles the flax which is cultivated in the United States; the stalk, the boll, the seed, the blue flower, closed in the day, and open morning and evening. The natives use it for making fishing-nets. Fields of this flax may be mowed like grass, for the roots are too large and run too deep in the earth, to be pulled like ours; and it would save the trouble of cultivating." This is worthy an experiment among our agriculturists. Can any of our readers give us any information of its culture among us?

New species of Wormwood.—The above writer also describes a new variety of wormwood, by some called the wild sage, which grows near the Rocky Mountains where the soil is gravelly and barren. "It grows 8 or 10 feet high, 4 or 5 inches diameter, and is frequently an obstruction to the traveller."

If similar to our wormwood, it would indicate an abundance of *potash* in the soil.

The native fruits of that luxuriant region, he describes particularly.

The Salalberry is a sweet and pleasant fruit, of a dark purple color, oblong, and about the bigness of a grape.

The Serviceberry is about the size of a small thorn apple, black when fully ripe, and pleasantly sweet like the whortleberry.

The Pambia is a bush cranberry.

The Gooseberry has many varieties—the common prickly, which grows very large on a thorny bush; the small white, which is smooth and very sweet; the large, smooth purple; and the smooth yellow, which are also of fine flavor. All of these attain good maturity, and such as grow on the prairies are very superior.

Currants.—There are three varieties; the pale red, the yellow, which tastes well, and the black.

The Snowberry, (*Symphoria racemosa*,) the beautiful shrub which grows in our gardens, is found here wild, and in great abundance.

Raspberries abound in all their varieties; in addition to which, there is a new species growing in the woods. The berry is three times the size of the common, of a very delicate, rich yellow, but the flavor is not so agreeable. This description corresponds with the Antwerp cultivated to some extent in our country.

The trailing Honeysuckle is beautiful and abundant.

The sweet-flowering Pea grows spontaneously, and in great luxuriance.

White and red Clover abound.

Strawberries are prolific, and of peculiarly rich flavor.

Sunflowers are numerous, but of small size.

Broom-Corn, a new variety on the bottom-lands.

Wild grain resembling barley or rye is indigenous.

Roots.—The *Wappatoo* is the common saggitaria or arrowhead, and is found only in the valley of the Columbia, below the cascades. The root is bulbous, and becomes soft by roasting, forming a nourishing and agreeable food, is much used by the Indians, and is an article of trade. It grows in shallow lakes and marshes, covered with water. The *cammas*, a truncated root in the form of an onion, is of great importance to the Indians, and grows in moist, rich ground. It is washed, pounded, and made into loaves like bread, and has a taste resembling liquorice. The *cowish*, or biscuit root, grows on dry land somewhat larger than a walnut, tastes like the sweet potato, is prepared in the same manner for food as the cammas, and is a tolerable substitute for bread. The *racine, amêre*, or little root, which grows on dry ground, is fusiform, and, though not pleasant to the taste, is very conducive to health. The *common onion* is found here; and another, characterized by its beautiful red flower, which often grows on volcanic scoriæ, where no other vegetation is seen.

We find in the Batavia Advocate the following synopsis of a letter from one of the Oregon missionaries, dated at Clowewalla, August 26, 1842:—

The writer speaks of the country in the highest terms of praise; says the soil is very fertile, and wheat is raised year after year on the same ground, without any diminution. The crop of last year

he speaks of as being the greatest yet raised. Some seventy-five thousand bushels were raised last year. Wheat that shells much in harvesting, he says, will sufficiently seed the ground to raise a good crop without any more being put in. Horses and cattle are abundant, and there is enough to eat for every one. No chance of people starving in Oregon, he says.

From his account there are all kinds of cattle and game. Horses, cattle, and hogs—and elk, deer, bear, wolf, panther, raccoon, fox, beaver, otter, muskrat, mink, &c., &c. Fowls are also abundant—there being the swan, goose, duck, bald and gray eagles, vulture, &c., &c. Among the timber are—white and yellow pine, cedar, hemlock, oak, ash, &c., &c.

Vegetables abound in great variety. There are also berries the year round, including cranberries.

Wheat is worth 60 cents to $1; peas the same; potatoes 40 cents; oats the same; pork $7 to $10 per hundred; beef $5 to $6; tallow 10 cents; butter do.; corn is scarce, and worth from $1 to $1.50. Garden vegetables are abundant, and the country well watered.

From another source which we do not recollect we find the following:—

The Pines of Oregon.—The pine forests are very extensive, the trees being of great size, and the timber extraordinarily beautiful, straight, and free from knots. All the timber of the genus *pinus*, of which there are a great number of species, is gigantic, when compared with our trees in this part of the world; but occasionally one is met with, huge almost beyond comparison. I measured, with Dr. Gardner, Surgeon of the Fort, (Vancouvre,) a pine of the species *Douglassi*, which had been prostrated by the wind: its length was above 200 feet, and its circumference 45 feet! Large as was this specimen, its dimensions are much exceeded by one on the Umptqua river, measured by the late Mr. David Douglass. The height of this tree was, I think, nearly *three hundred feet*, and its circumference *fifty-six feet!* The cones of this pine, according to Mr, Douglass, were from twelve to fifteen inches in length, resembling, in size and form, sugar loaves.

For the American Agriculturist.

THE AGRICULTURE OF CUBA.—No. IV.

San Fernando de Nuevitas, 20th May, 1843.

Dear Sir:—The next object here to which I shall call your attention, is the rearing and management of bees. This business is extensively carried on in many parts of the island, and is usually attended with good success. There are several apiaries containing upward of 2,000 hives of bees, which will produce, on an average, two swarms in a year. The usual way of commencing, is to procure a few swarms at first, and then allow them to multiply to the extent required. No apiary is allowed, according to the existing laws of this country, to be located within six miles of a sugar estate, on account of the danger and injury that would arise from the bees. The hives are commonly formed of sections of hollow trunks of trees, which are laid horizontally about a foot and a half above the ground, with both ends left open. They are usually placed under plantain or other trees, in order that they may be screened from the sun during the hottest hours of the day. As soon as the hives are filled with combs, a portion of the honey is removed from the end opposite to that in which the bees are at work, and then they immediately recommence filling the vacancies thus made, without danger or the loss of the swarms. The honey collected during the spring and rainy months is regarded as unfit for use until it is worked over a second time by the bees, on account of its watery or deleterious qualities, which are supposed to be imparted chiefly from being extracted from poisonous plants, or trees. Two men are counted sufficient to manage 100 swarms, besides being able to attend to the rearing of cattle, the cultivation of corn, tobacco, plaintains, yucca, or other products.

Notwithstanding this rude mode of raising honey, it is made, in many cases, a very profitable business. The annual yield of each hive will sell, when delivered at the place of shipment, for $2. I would suggest that some of the southern agriculturists of the United States, particularly in Florida and Louisiana, would determine whether this branch of industry can not be carried on equally advantageous there.

I shall conclude these communications by giving a short statistical account of the island, which has been gleaned, either from public documents, or other authentic sources.

Census of 1841.

	Males.	Females.	Total.
White	227,144	191,147	418,291
Free colored	75,703	77,135	152,838
Slaves	281,250	155,245	436,495
	584,097	423,527	1,007,624

Persons over 80 Years of Age.

Whites	1,175
Free colored	701
Slaves	1,198
Total,	3,074

The official returns of the exports of the island-products, in 1842, were as follow:—

Mahogany	56,161
Spirits from cane	204,550
Cotton	75,834
Coffee	2,998,269
Sugar	11,447,009
Cedar	40,101
Wax	290,828
Copper ore	4,981,405
Hides	21,130
Sweetmeats	7,091
Fruits	49,298
Honey	71,325
Molasses	744,608
Horses and mules	1,205
Cigars	749,812
Tobacco	1,461,760
Other articles	200,241
Total,	$23,400,708

The revenue or taxes of Cuba, in round numbers, is about $12,000,000; $2,500,000 of which go to support the army, $1,500,000 to the navy, $5,000,000 for the civil functionaries, and $3,000,000 are sent to Spain.

The Cubean navy consists of one frigate, one sloop-of-war, two war steamers, six brigs, and eight schooners.

D. Jay Browne.

For the American Agriculturist.

TANNING ON THE PLANTATION.

Ingleside, Miss., Sept. 19th, 1843.

Tanning leather, for the use of the plantation, is an item of good management that should not be overlooked by any planter. Nor would it be as much overlooked as it is, if the simplicity of the process was generally known—that process, I mean, that will suffice for making leather for home use. The *tanner* by profession, in order to prepare an article that will command a good price in market, and have a merchantable appearance, puts the hides and skins through a greater number of manipulations; and, that he may work to better advantage, has his arrangements on a more extensive scale.

The vats, tools, and implements, really needed, are few and simple. Four *vats* will generally be found all-sufficient; one for a *pool* of fresh water, and for *baiting;* one for *liming;* another for *coloring;* and a fourth for *tanning*. The best size, in the clear, is seven feet long, four and a half feet wide, and five feet deep. They should be placed so as to be easily and conveniently filled with water from a spring, running stream, or cistern. Dig the holes 9 feet, by 6½ and 6; if the foundation is clay, the depth need not be over 5 feet. Form a stiff bed of *clay mortar* in the bottom, on which to lay the floor, and on it erect the sides and ends of the vat, of plank of almost any kind, sufficiently thick to resist the pressure from without—two inches will be thick enough. When this is done, and the whole nailed fast, fill in the vacant space all round with *well-tempered* clay-mortar, ramming it effectually: it is on this, and not the planks, that dependence is placed for rendering the vat perfect. When well made, a vat will be good for a long lifetime—the *ooze* preventing the decay of any but the top round of plank. Such a vat will hold 15 large beef hides (30 sides), besides a number of small skins.

The material used for tanning, is the bark of the red or black oak, stripped when the sap flows in the spring, stacked and dried—of which about four pounds are supposed to be necessary to produce one pound of leather. There is an article occasionally used, called "catechu," which is an extract made from the wood of a mimosa-tree, a native of India, half a pound of which answers the same purpose. Galls, willow bark, the bark of the Spanish chestnut, and common elm, as also sumach, are all used by the tanner. It has been recently found that the root of the palmetto answers an equally good purpose with the best oak bark.

Bark has to be ground as wanted; or if the quantity needed is small, and it is not thought advisable to incur the expense of a *bark-mill* (from $10 to $18), it may be pounded in a large mortar, or beat up on a block. It will require one third more of *pounded* than of *ground* bark, to afford equally strong *ooze*, which is the infusion of bark.

The principal tools requisite are a *fleshing-knife*, *currier's knife*, a *brush* like a stiff horse-brush, and a *fleshing-beam*. The fleshing-beam is made by splitting in two a hard-wood stick of about a foot in diameter; inserting two stout legs, some thirty inches long, in one end on the split side, so that the other end rests on the ground, with the round side up, the elevated end being high enough to reach the workman's waist. A fleshing-knife may be made by bending an old draw knife to suit the *round* of the fleshing-beam.

The skins of bulls, oxen, cows, and horses, are called *hides;* those of calves, deer, sheep, &c., are known as *skins*.

Fresh and *dried* hides receive the same treatment, except in the washing process. Those that are salted and dry (and no hide should be dried with less than from two to four quarts of salt being rubbed on the flesh side—dried without salt, it is extremely difficult to soften them), require to be steeped, beaten, and rubbed, several times alternately, to bring them to a condition sufficiently soft for tanning.

Green or fresh hides must be soaked in pure water from 12 to 24 hours, to extract all the blood, &c., and soften the extraneous fleshy matter, which must then be removed—throwing one hide at a time on the fleshing-beam, *grain* or hair-side down, and scraping or shaving it off with the fleshing-knife, which must be somewhat dull or the skin is apt to be cut. They are then put in the *liming vat*, which is supplied with strong lime-water, by filling the vat a little over half full of water, and adding thereto four bushels of unslacked (or of air-slacked) lime, or at the rate of ⅔ of a bushel of lime to the barrel of water. This will suffice for fifteen hides; each time that they are removed and a fresh lot of hides put in, add another bushel of lime, which will keep up the strength for a twelvemonth. Before using, stir the lime well up, and while it is thus mixed with the water put in the hides evenly, so that the lime will settle on every part of them. They are to remain here from ten to fifteen days, or for three or four days after the hair will rub off with the finger completely and with ease. While in the liming-vat, they must be moved up and down every other morning, to expose them to the air, and to the equal action of the lime. Being now ready for unhairing, cut each hide in two, by slitting them along the centre of the back with a knife, forming them into *sides*. Throw ten or twelve of these sides on the fleshing-beam, and strip the hair off with the knife; and as they are unhaired, throw each one into the vat of fresh water to bait or soak. When the lot of sides and skins in hand have been all unhaired and thoroughly washed, throw them again, and at once, on the fleshing-beam, with the *grain* or hair

side up, and *work them over* (rub and press them) with the knife until all the gummy or mucilaginous matter is worked out. This should be repeated two or three times during ten or twelve days, being each time baited anew in fresh water. And this *working over* must only be done when the sides feel soft and smooth to the touch; as they will at times, from some unexplained cause, feel rough, at which time they must not be *worked over*. While they are thus *baiting*, they must not be neglected, or they will soon spoil. Tanners are in the practice of adding 1000th part of sulphuric acid (oil of vitriol) to the last *bait*, which has the effect of swelling the pores and distending the fibres, and thus rendering the skins more susceptible to the action of the ooze: forty-eight hours generally suffice for this last *baiting*.

In the meantime, some good strong *ooze* should be prepared for the first *tanning* process, called *coloring*. Fill a vat a little more than half full of water, and add bark, in the proportion of 1½ bushels of *ground*, or 2 bushels of *pounded* bark, to the barrel of water, which will bring the vat up to about two thirds full. When the bark has soaked from four to five days, the sides are put in, and allowed to remain 15 days; during which they must be *once* well and carefully *fleshed* and *worked over*, and must be drawn up and down every morning, for the first week at least, and the bark well *plunged* or stirred up, to have them *color* evenly.

After this, the vat being now two thirds full of this same *ooze*, after drawing out the hides, lay a good coating of fresh bark, of say an inch thick, on top of the water, on which it will float; lay on this a side, spread out evenly; and if it has to be lapped over in any part, lay on more bark until it is all well coated, taking care to place those hides at the bottom of the vat now, that were at the top last time. On this side lay an inch-coating of bark, and on that another side, and so on, with alternate layers of bark, until the vat is full, or the sides all laid away.

In this, which is called the *first bark* the sides must lie four weeks. They are then drawn out, and the spent-bark taken out with a *skimmer* or *drainer*. The sides are then replaced as before, with alternate layers of fresh bark, in the same ooze, which has acquired some additional strength, notwithstanding the amount of tannin and extractive matter, contained in the bark, that has become intimately combined with the animal fibre of the hide. In this *second bark* they remain six weeks undisturbed, when they receive a *third bark*, in the same way, in which they are left another six or eight weeks. Three *barks* will suffice to tan deer, hog, calf, and other small skins; four *barks* will make good sole leather, but five are preferable.

The *tanning* process being completed, *sole* leather is taken out of the vat, rinsed effectually, and dried in the shade, hanging the sides up by two of their corners to joists, where they may remain until wanted. Those sides intended for upper and harness leather, (which are those of cows, &c.—the largest and thickest bullock hides being used for sole leather), as also deer, hog, and other small skins, being thoroughly rinsed, are spread out on a strong table, with the grain or hair side up, and scoured with a stiff brush, like a very stiff horse-brush, occasionally throwing on pure water, until *all the ooze* is scoured out. Tanners use the edge of a stone, made smooth, to assist in rubbing out the ooze, and all the water that can possibly be rubbed out. They also use what they call *a slicker*, being a dull edge of copper of about six or seven inches long, set in a piece of wood, to serve as a handle.

After they are all served thus, and rubbed as dry as possible, the table is cleaned off, and the skins thrown back upon it, *grain side* up, and are rubbed with tanner's oil (cod-fish oil), as long as the leather will receive it. Harness leather must be completely saturated. As they are oiled, fold them up and lay them aside. When they are all gone over, lay one on the table at a time, *flesh* side up, and with a rag rub on all the *dubbing* that the leather will absorb. Thin hides require but a small quantity; harness leather must have a heavy coating.

Dubbing, which consists of equal parts of tar and tallow, melted together, and well mixed, must be made the day previous to being used. Lard *may* be used in place of tallow, but will require a lesser proportion of it. Each side of leather is then hung up by two corners to joists, there to remain until perfectly dry, or until wanted.

If iron or steel touches a hide during the process of tanning, when in the least wet, or even moist, it will discolor it, forming an indelible black mark.

To *blacken* harness or other leather, take the skin when completely dried, and if any greasy spots appear, showing that more oil or dubbing has been applied than the leather could absorb, wet the spots with a little strong ooze, and scrub them out with the brush. Then apply a good coat of *copperas* (sulphate of iron) dissolved in ooze, until the leather has a good color all over. After this, when dry, put on another good coat of oil. The leather may then be smoothed off with a rounding edge of polished steel, or glass, or stone.

T. Affleck.

For the American Agriculturist.

CHALLENGE OF HEREFORD CATTLE.

Hereford Hall, near Albany,
September 10th, 1843.

I have had a number of breeders from all parts of the United States to view the Herefords, and most of them say they are *agreeably* disappointed; they expected to see, from what they had heard and read of them, coarse, plain animals. Now, sir, to remove this erroneous impression, and to place them in a position for proof, I will show six to ten breeding cows, and a bull, all *pure Herefords*, for beauty, symmetry, quality, milking, and activity for breeding working oxen, against a similar number of any breed in the United States, for a silver tankard, value $50, and meet the acceptor half way. I do not do this to "*brag*," but to defend.

William H. Sotham.

SHOW AND FAIR OF THE N. Y. S. AG. SOCIETY FOR 1843.

[Continued from page 234.]

Thrashing-Machines.

1st, to Joseph Hall, of Rochester, 6 to 8-horse-power thrasher and Pitt's cleaner and separater $20
2d, to J. Hale, of North Bloomfield, for 2-horse-power tread-machine and thrasher 10
3d, to Benjamin M. Freeborn, of New York, for a 2-horse-power, with a machine which thrashes over the cylinder Vol. Tr.

The clover-mill of Mr. Thos. D. Burrall, of Geneva, appears to be a very perfect machine in its construction, and, from evidence produced to the committee, performs its work with great perfection. It can be worked with any ordinary horse or water power: costs 60 to 70 dollars. The committee award a diploma.

Fanning-Mills.

1st, to A. S. Patterson, of Rush, Monroe co. $8
2d, to A. P. Dickey, of Elba, Genesee co. 5
3d, to Stephenson & Myers, Port Byron, Cayuga Vol. Tr.

These are also very important implements for the farmer and grain-grower; and we know of no article, from the old Dutch corn-fan, and the rude, imperfect mill of thirty years past, that has advanced to a state of such perfection as was exhibited at this great fair. There were a dozen or more present, and it was little better than a hap-hazard guess to say which deserves the preference —some excelling in one point and some in another; so that the committee have not the greatest confidence in their decision, especially as they did not see many of them in operation, and the committee were not unanimous in their conclusions. Among those to whom premiums were not awarded, the committee would mention, as deserving commendation, Mr. Heffron, of Venice, Ontario co.; Messrs. J. Patterson & Co., Rush, Monroe co.; Messrs. Long & Stone, York, Liv. co. Some of these were provided with double and treble screens, to meet all contingencies.

Horse Hay-Rakes.

These are highly valuable labor-saving implements, performing with one man and a horse the labor of 6 or 8 men, and at a time when labor is most valuable. Several of excellent construction were offered. The committee awarded premiums as follows:—

1st, to Lewis Swift, Clarkson, Monroe co. $8
2d, to Geo. W. Wiggins, Lima, Liv. co. 5
3d, J. Holbrook, Penn Yan, Yates co. Diploma.

Straw-Cutters.

In this article the committee were utterly confounded, so numerous and various were the plans and contrivances for performing the labor required. They have, however, generally given the preference to the *straight and plain* cutting edge, and therefore award the premiums as follows:—

1st, to Nathan Parish, of Rush, Monroe co., (Israel Patterson's patent) $8
2d, to Joseph W. Webb, of Rochester 5
3d, to Robert P. Gibson, of New York Vol. Tr.

Field-Cultivators and Grain-Coverers.

These are desirable implements, not as yet in general use among farmers, but must eventually prevail, as they save full one half the labor in summer fallowing, and are a great improvement over the harrow in covering grain. The committee award as follows:—

For the best Cultivator and grain-coverer, to Harlow Mitchell, of Rutland, Jefferson co. $8
2d, to Carmi Wright, of Adams, ditto ditto, for corn, &c. 5
3d, to B. Langdon, of Troy, ditto for weeding and hilling corn, and digging potatoes Vol. Tr.
To S. W. Cool, Geneva, for a field-cultivator and grain-coverer, combining many desirable qualities Diploma.
To Marcus Adams, of Adams Basin, Monroe co., for a cultivator for corn and root-crops, made entirely of iron, very ingeniously and mechanically constructed, and, as far as the committee could judge without trial, a very desirable implement of husbandry.

Harrows.

For the best harrow, to Marcus Adams, of Ogden, Monroe co., hinge drag, with iron frame $8
2d, to Alexander Thompson, Manchester, Ontario co. 5

Grain and Seed-Drills.

1st, to Abraham Randall, Verona, Oneida co., for grain-sower and planter $8
2d, to Newell Adams, Boston, Mass., for seed-drill —Lewis' patent "Yankee corn-planter" 5

Miscellaneous.

To C. Goss, of Madrid, St. Lawrence co., for a superior adjusting grain-cradle, of low price and good workmanship, a discretionary premium of $5
To William Gates, of Barre, Orleans co., for a new and singular contrivance for raking grain, a discretionary premium of 5
To Julius Hatch, of Rochester, for a machine for sowing grain, plaster, and grass seeds, broadcast —

[This valuable machine having been previously exhibited, and a premium awarded, was excluded from competition by a rule of the society.]

To Wm. G. Booland, Little Falls, Herkimer co., agent for Bird & Wells' patent smut-machine, manufactured at Trenton, New Jersey Diploma
To H. H. Everts, of Rochester, for a straw and root-cutting machine, a discretionary premium of 3
To L. Bostwick, of New York, for a portable grain mill, worked by horse power, a Diploma and Vol. Tr.
To T. R. Hussey, of Auburn, Cayuga co., for a corn and cob-crusher, by horse power, discretionary premium of $5
To H. H. Davison, of Rochester, for a valuable contrivance for fixing the scythe to the snaith Vol. Tr.
To Samuel Mallory, of Alexander, Genesee co., for a rut-scraper, to dress roads and fill ruts, discretionary premium of $5
To A. L. Blanchard, of Albany, for a beautiful and ornamental statue-stove, for burning wood and coal, combining the emission of heated air, discretionary premium of $5
To Jirah Wing, of Hume, Allegany co., for a model for a cheap, plain, and durable eave-trough, for

barns, back buildings, and sheds, a discretionary premium of $5

For the committee,
L. B. LANGWORTHY, *Chairman.*

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BUTTER AND CHEESE.

For the best sample of butter, not less than 80 lbs., a premium was awarded to H. Morrison, of Orange co. $8
2d, to A. D. Porter, of Canandaigua, Ontario co. 5
3d, to D. Wood, West Bloomfield, " 5
4th, to Wm. Sternberg, Henrietta, Monroe co. 5
5th, to Isaac Seely, " " 4
6th, to D. Piffard, of Piffardiani, Liv. co. 2 Vols. and 2
7th, to E. S. Bartlett, of Romulus, Seneca co. 3
For the best cheese, to Thomas Burch, Little Falls, Herkimer co. $8
2d, to Perez Hathaway, Farmington, Ontario co. 7
3d, to H. Arnold & Son, Hamburgh, Erie co. 6
4th, to Jerome Ives, Hownsfield, Jefferson co. 5
5th, to Newberry Bronson, Warsaw, Wyoming co. 5
6th, to John Lapham, Farmington 2 Vols. Tr. and 2

[Several lots of butter were so nearly alike, that the committee could not agree which should have the preference; they therefore divided the premiums among them equally. The report of the committee was inadvertently sent to Albany before we had copied the remarks.]

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MAPLE SUGAR.

The committee on maple and cornstalk sugar respectfully report, that only four specimens of maple sugar have been presented to their consideration, of which one by Joel Woodworth, of Watertown, Jefferson co., is of very superior quality, both on account of its whiteness, approaching to the best refined loaf sugar, and on account of its excellent grain and flavor. They award the first premium of $15.

The second premium of $10 they award to David Dow, of Batavia, Genesee co.

The third and fourth premiums they do not award, because the *quantity* presented by Asahel Dow, of Bethany, Genesee co., and Charles A. Higgins, also of Bethany, was so small as not to come within the rule of the society, requiring 50 lbs. of sugar as the quantity to be presented to entitle to a premium.

The committee have great pleasure in stating that Mr. M. Adams, of Ogden, in Monroe co., has gone into the experiment of manufacturing sugar of cornstalks; and for that purpose has been cutting, during the present season, one acre of the "eight-rowed yellow northern corn;" he has constructed an iron mill for crushing the stalk and expressing the juice, which answers the purpose admirably; but it is yet too early in the season to know the result of the experiment, as a part only of the cornstalks have been gathered and manufactured, and the remainder are yet standing in the field.

Mr. Adams has, however, already made about 400 wt. of sugar, a sample of which he has submitted to your committee, and which, though not yet clarified, appears to be of a fair quality, capable of equalling the best of sugar made from the cane. The stalks still on the ground he thinks will make 400 wt. more sugar; but had it not been for the excessive drought which has prevailed in his section of the country, he is satisfied that the acre planted and experimented upon by him, would have produced 1000 weight of sugar, which was the rate yielded by two rods of the land which he measured off, the proceeds of which he worked up by itself.

Upon the whole, Mr. Adams is perfectly satisfied that sugar can be made in this part of the country, from cornstalks, of superior quality and flavor, and equal in every respect to the best sugar made from the cane, *and so as to remunerate well for its manufacture.* He proposes, at the next meeting of the society, to present a full report of his present experiment, and your committee have great confidence that it will be of such a nature as not only to entitle Mr. Adams to the premium offered by the society, but to the praise of being the first to carry into actual operation an experiment that has been anticipated as the source of great wealth and benefit to the agricultural interests.

JOHN GREIG,
ROSWELL RANDALL,
A. B. DUNLAP, } *Committee.*

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REPORT ON VEGETABLES.

COMPETITORS' NAMES, AND ARTICLES OFFERED.

Hugh Mulholland, Brighton, fine, long, blood beets, potatoes, parsneps, carrots, onions, cabbage, and purple egg-plant.

Wm. Hamilton, beets, tomatoes, onions, parsneps, and pumpkins.

J. Medberry, Valparaiso, winter squash.

H. N. Langworthy, winter crook-neck squashes, 12 varieties of seedling potatoes, water-melons, fine sample of pink-eye potatoes, a new variety of musk-melon, of exquisite flavor; specimens of a variety of Spanish tobacco, the seed of which was received from Mr. Ellsworth, of the patent office, some of it growing and some partially cured, of fine appearance, the quality not yet tested.

Samuel Ashton, white field-carrots, celery, table-beets.

Ira Lee, onions, beets, and samples of seed corn.

Nathaniel Hayward, sweet corn, blood and turnep-beets, Meshannock potatoes.

John Adams, white and red cabbage, onions, and tomatoes.

C. F. Crosman, sweet corn, blood beets, of extra length, white field-carrots, summer, crook-neck, and scollop squashes, onions, and Bassano beets.

Theodore Backus, onions, cabbages, and winter squashes,

John Donnellan, Minorca musk-melons, and cabbage.

E. Waugh, leeks, celery, and curled parsley.

Richard Cooper, curled parsley, carrots, white solid celery, melons.

James Bradford, tomatoes, parsneps, celery, 2 varieties of potatoes, and vegetable oysters.

Wm. Webb, beets, curled parsley.

Alfred Fitch, pink-eye potatoes.

C. S. Walling, several varieties of beets.

Michael Elsenbech, fine specimens of cabbage, potatoes, ruta-baga, and turneps.

[The above were products of Rochester and Monroe.]

E. Murdoch, Le Roy, Genesee co., seedling potatoes.

James S. Wadsworth, Geneseo, 12 ears of seed corn, very long; good specimen of Lima beans, tomatoes.

Arthur H. Steen, Mount Morris, Lima beans, tomatoes, and egg-plants.

Oliver Phelps, Canandaigua, 5 samples of potatoes, red celery, winter squashes, and pumpkins.

Wm. Blossom, Canandaigua, celery and onions, a sample of rice-corn grown in the open air.

Hiram E. Hotchkiss, Lyons, Wayne co., varieties of musk-melons.

Abner Bryant, Black Rock, early Bassano, white turnep, and long blood beets, onions, carrots, parsneps, tomatoes, celery, crook-neck and summer scollop squashes, early golden Sioux corn.

Elihu Tyler, Buffalo, tomatoes.

[Several lots of fine vegetables are omitted, because they were not labelled, and the owners were not known to the committee.]

Premiums awarded.

Hugh Mulholland, Brighton, for 2 best purple egg-plants	$1
The same, for the 3 best heads of cabbage	1
Nathaniel Hayward, Brighton, 12 best blood beets	1
The same, for the best half-peck of potatoes	2
H. N. Langworthy, Irondequoit, for the best crook-neck winter squashes	1
The same, for the best water-melons	1
The same, " best musk-melons	Vol. Tr.
The same, " best twelve varieties seedling potatoes	Diploma.
Alfred Fitch, Riga, 2d best half-peck of potatoes	$1
Wm. Hamilton, Rochester, best 12 parsneps	1
The same, best pumpkins	1
C. F. Crosman, Rochester, best table summer scollop squash	1
The same, 2d best seed sweet corn	1
The same, best white field carrots	Vol. Tr.
Richard Cooper, Rochester, best celery	$2
E. Waugh, Rochester, best curled parsley	1
Michael Elsenbach, Rochester, fine specimens of cabbages and potatoes, discretionary premium of	1
E. Murdoch, Le Roy, best half-peck seedling potatoes	5
James S. Wadsworth, Geneseo, 12 ears best seed corn	1
Arthur H. Steen, Mount Morris, half-peck best Lima beans	1
Wm. Blossom, Canandaigua, fine specimen of rice corn, discretionary premium of	Vol. Tr.
Elihu Tyler, best 12 tomatoes	$1
Abner Bryant, Black Rock, best table onions	1
The same, best table carrots	1
The same, fine early Bassano beets	Vol. Tr.

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REPORT ON FRUIT.

The committee on fruits have the gratification of reporting, though the year has proved very unfavorable, a greatly increased collection in comparison with former years, both in the variety and extent of the products of the fruit garden. Among the contributors are the following:—

Oliver Phelps, of Canandaigua, who presented 27 varieties of apples and a collection of pears.

David Thomas, Cayuga county, (presented by Thomas & Smith, of Macedon,) 48 varieties of the apple, 36 of pears, 10 of peaches, 5 of plums, 2 of nectarines, and other fruits.

Abner Bryant, Buffalo, 12 varieties of apples and miscellaneous fruits.

Benjamin Hodge, of Buffalo, 42 of apples.

Nathaniel Hayward, Brighton, 23 of apples and grapes.

Dr. Armstrong, Rochester, specimens of plums.

Charles Marchant, Greece, 36 of apples.

John Hiler, Penfield, 9 of apples.

Hiram Robbins, Penfield, apples and plums.

Joseph Christopher, apples.

Elihu Tyler, Buffalo, a collection of grapes, apples, and peaches.

Ellwanger & Barry, a large collection of apples and pears.

Wm. Otis, Gates, Monroe co., 14 varieties of apples.

Samuel Moulson, Rochester, a miscellaneous collection of fruits.

Zera Burr, Perinton, Monroe co., fine seedling apples and quinces.

Robert N. Brown, Greece, 12 varieties of apples.

E. C. Frost, Catharines, Chemung co., 3 varieties of pears.

L. E. Lapham, Yates co., apples and pears.

C. M. Eames, New Hartford, Oneida co., fine specimens of the lemon, presented by Jacob Gould, Rochester.

Wm. Mervine, Utica, fine sweet-water grapes.

Marcus Morse, Rochester, peaches and grapes.

Mrs. Marshall, Rochester, several varieties of plums, and Columbia and other peaches.

Abraham Vought, Mendon, plums.

Henry Deyo, Greece, peaches.

Jonathan Buell, East Bloomfield, seedling apples (the Early Joe.)

J. W. Smith, Rochester, fine Isabella grapes, well ripened in the open air, and good new seedling peach.

J. A Hadley, quinces.

T. H. Rochester, pears.

Jas. S. Wadsworth, very fine grapes and pears.

Jacob Gould, Rochester, plums and pears.

Harry Pratt, Rochester, collection of fruits.

Thos. H. Hyatt, Rochester, peaches, apples, and pears.

L. Jenkins, Manchester, Ontario co., pears (Seckel and Virgalieu.)

——— Avery, Rochester, pears.

Wm. Sternberg, grapes, &c.

Charles H. Carroll, Groveland, Livingston co., seedling peach.

Isaac Moore, Brighton, peaches and pears.

S. Vanderniter, Buffalo, bottled gooseberries.

Isaac Hills, Rochester, 8 fine varieties of plums.

E. Scrantom, plums and peaches.

H. V. B. Schenck, fine peaches.

Joseph Medberry, plums.

M. A. Norton, Victor, pears.

H. G. Hotchkiss, Vienna, fine grapes of several varieties, all grown in the open air, and excellent peaches.

Sidney Allen, Rochester, grapes, peaches, and pears.

H. N. Langworthy, peaches and grapes.

The great number of collections presented has prevented a thorough examination of the many varieties composing them, as well as an enumeration of the names.

The committee have made the following awards. Where members of the committee were compe-

titors, they were not consulted in the decision. The committee, also, as a matter of course, excluded those collections not cultivated by the contributors themselves.

For the greatest variety of table apples, David Thomas, Cayuga county.

For the second greatest variety, Benj. Hodge, Buffalo.

For the third greatest variety, Oliver Phelps, Canandaigua.

For the best twelve sorts of table apples, Abner Bryant, Buffalo.

For the best new seedling apple (the Early Joe), Jon. Buell, East Bloomfield.

For the greatest variety of table pears, David Thomas, Cayuga co.

For the greatest variety of winter pears, the same.

For the best twelve quinces, Nathaniel Draper, Brighton.

For the best twelve peaches, H. G. Hotchkiss, Vienna.

For the best twenty-four plums, Isaac Hills, Rochester.

For the best six bunches native grapes, J. W. Smith, Rochester.

For the best six bunches foreign grapes, Elihu Tyler, Buffalo.

The committee recommend a discretionary premium of a volume of Transactions to J. W. Smith, of Rochester, for his fine collection of grapes and other fruits. Though the specimens of pears were numerous, they did not consider any one collection sufficiently extensive to deserve the second premium. Respectfully submitted.

JOHN J. THOMAS,
BENJ. HODGE,
N. GOODSELL,
IRA DOTY,
J. R. MURRAY,
} *Committee.*

ON SILK AND COCOONS.

The committee on silk report, that the exhibition of cocoons and reeled silk was very extensive and highly creditable. There was a great variety of specimens of manufactured silk, many of them very handsome; and the whole exhibits a highly gratifying improvement in this branch of American industry.

They have awarded to Mrs. E. M. Reed, of Rochester, a premium of $15, for the best half-bushel of cocoons.

To Justus Beardsley, of Perinton, Monroe co., for the 2d do. $10
To Mr. B. Brown, of Ogden, Monroe co., 3d do. 5

The committee being unable to discover any preference in the following, have awarded to Edward Stanley of Ogden, John Adams of Ogden, and E. Murdock of Le Roy, each $3 and a copy of the Volume of Transactions.

To N. D. Hart, of Le Roy, for the best reeled silk $15
To John Adams, of Adams Basin, for 2d do. 10
To James M. Hathaway, of Bristol, 3d do. 5
To Samuel R. Tracy, Newark, Wayne co., 4th do. Vol. Tr.
To Mrs. D. Carter, of Bloomfield, for the best specimen of manufactured silk (gown silk) $15
To David Irish, of Perryville, Madison co., for the 2d do. (sewing silk) 16
To Mrs. J. Howe, Avon, 3d do. (sewing silk) $5
To Edwin Stanley, 4th do. (sewing silk veil) Vol. Tr.
To Mrs. Raymond, for silk cape $2
To Eliza B. Orcott, of Centreville, for silk hose 2
To Mrs. Roswell Carter, of Albany, for a net-silk shawl 2
To J. Haskins, Le Roy, for a ball of twist 2
To Benjamin M. Benedict, of Bergen, Genesee co., for sewing silk 2
To Enos Holmes, of Clarendon, for sewing silk 2

There were but two silk reels exhibited, and neither being superior, or showing any new improvement, they have awarded to Edward Stanley of Ogden, and Seneca Reed of Greece, each a Volume of Transactions.

There was a great variety of manufactured articles exhibited, and deserving a more extended notice than it is in the power of the committee to give; and some few specimens had lost their labels, among the latter of which was a very handsome specimen of twist.

A beautiful sample of sewing silk was exhibited by P. Staats, of Buffalo; silk fringe and mitts, by Miss Julia M. Backus, of Rochester; silk hose, by Mrs. E. M. Leech, of Lima; silk vesting and apron silk, by Edwin Stanley; handkerchiefs, hose, pic-nic gloves, and mitts, by Mrs. Carter, of Bloomfield; silk hose, by Mrs. Franklin Darrow, of Darien; silk-net handkerchiefs, by Mrs. Lydia Murphy, East Avon; gloves and handkerchiefs, by Ira Philips, Clarendon.

The committee recommend that hereafter a clerk be specially assigned to take charge of and keep in order this branch of the exhibition.

O. HUNGERFORD,
T. MELLON,
WM. KIDD,
H. O'REILLY,
M— LANE,
} *Committee.*

REPORT ON PLOWS.

The committee on plows would respectfully report, that they have attended to the duties assigned them, which, the society are aware, were neither few nor small. We have the satisfaction, however, of acknowledging that we were furnished every facility for testing the traction of plows by the competitors, who, we are happy to say, manifested a very laudable zeal in rendering us every assistance in our work; and although laboring under the strong excitement incident to a competition for the highest prizes offered by the society, and upon an article most important to the farmer, treated each other and the committee with a degree of urbanity highly creditable to this class of mechanics. We had the use of four dynamometers—one belonging to the society; one upon the same construction, but a better instrument, furnished us by S. W. Chase, of Amsterdam; one of a spiral construction, numbering as high as 1,200 pounds, but not sufficiently minute for our purpose, by G. D. Avery, of Chenango county; and another, the most serviceable, invented by A. K. Cone, of Batavia, called the "scale-beam dynamometer." Mr. Chase also kindly furnished us a windlass and small wheels, ropes, &c., and Mr. Avery, pulley-blocks, measures, &c., which very much expedited

the business before us, and for which we would tender them our thanks.

Trial of Plows.

On the morning of the 22d, we were met by a large number of those interested in the manufacture of plows, and proceeded to the trial with the dynamometer. Each plow was drawn by a windlass through a stiff sward, the distance of five rods, and required to cut a furrow twelve inches wide by six deep.

The following plows were tried, and the average of their resistance taken as indicated by the dynamometer:—

Names of Ploughs.	Makers or Patentees.	Pounds draught.
American.	M. H. Codding, Bristol, Ontario co.,	330
Cayuga county.	P. D. Wright, Rochester,	388
Worcester county,	E. Davis, Watertown, Jefferson co.,	386
Diamond.	H. Delano, Mottsville, Onondaga co.,	365
Peekskill.	T. Mercer, Peekskill,	348
Williamsport.	S. W. Hall, Williamsport, Penn.,	337
Montgomery county,	S. W. Chase, Amsterdam,	255
Do. [larger size,]	do.	375
Opposition,	C. Seymour, Lockport,	397
Washington,	I. S. Teft, Williamsville, Erie co.,	381
Oxford,	Oxford, Chenango co.,	371
Ontario county,	R. C. Stiles & Co., East Bloomfield,	431
Veto,	I. Waite, Albion,	335
Wyoming county,	Hicks & Bailey, Perry, Wyoming co.,	383
Oneida chief,	E. Wilson, Vernon, Oneida co.,	381
Caledonia,	P. Elyea, Caledonia, Livingston co.,	345
Middleport,	I. Van Bronklen, Middleport, Niag. co.,	438
Eagle, [Mass.]	Ruggles, Nourse, & Co.,	415
Geneva,	T. D. Burrell, Geneva,	397
Do. [shell wheel],	do.	298
Do. [Scotch shell wheel]	do.	325
Locklin improved,	I. C. Fitch, Dansville, Livingston co.,	483
Iron-beam,	E. Richardson, Bashnell's Basin,	388
Livingston county,	H. Wiard, Avon,	400

We ought here to observe, that some of these plows were of a larger size than others, and their surface-draft, of course, greater; as the Livingston county, Ontario county, and some others. Some of them were highly polished, while others were nearly as rough as they came from the moulds. Some were provided with very sharp coulters, while others had merely a cutter upon the shin, which made a very manifest difference. Many of them came unprovided with a gauge-wheel; and the difference of draught was so great with or without a wheel, that those who had not a wheel, borrowed one before they would go through with a trial. Your committee think this point settled in the minds of every one who saw this trial, that a wheel is an indispensable accompaniment to a good plow in sward land, or indeed in almost any other. There was also a difference in the dynamometer, as Mr. Chase's, which was injured after the trial of four or five plows, indicated every ten pounds, while the scale-beam, afterward used, indicated only every thirty pounds.

After we had gone through with a very thorough and laborious trial with the windlass and the dynamometer, we proceeded to try them with a strong pair of horses. Each competitor was allowed to hold his own plow until it run to suit him, and then it was held by one of the committee. We gave them a thorough trial in this way, and proceeded to compare their relative merits as to construction and workmanship, and heard explanations of their peculiar merits, from their proprietors.

Having thus obtained what information we could as to their traction, and compared their relative merits as to construction and durability, your committee came to the unanimous conclusion, that we could not award premiums as published by the society. We are not prepared to say, neither do we believe any judicious man would say, that either of these plows was so superior to the others, as to entitle it to the large premium of fifty dollars. They were all superior plows; and the more we examined them, the more we were convinced that such a collection was never seen before, in this or any other land.

We therefore proceeded to divide the highest premium among the largest-sized plows, giving the

Caledonia, P. Elyea, of Caledonia	$25
Wyoming, Hicks & Bailey, Perry, Wyoming co.	15
Williamsport, S. W. Hall	10

The remaining premiums are divided among plows of the second size, as follow:—

American, M. D. & M. H. Codding, of Bristol, Ontario	$15
Geneva, T. D. Burrell, of Geneva	12
Montgomery county, S. W. Chase, of Amsterdam	10
Oneida chief, E. Wilson, Vernon, Oneida co.	8
Veto, I. Waite, Albion, Orleans	5

We also recommended that diplomas be given to the iron-beam and Peekskill, and volumes of the Transactions to the Livingston county, the Cayuga county, and Diamond plows.

Your committee also witnessed with great satisfaction, the trial of a plowing-machine, or gang of plows, constructed by Thomas Wiard of Avon, and have no hesitation in recommending it as an article of much importance to the farmer. The facility and great rapidity with which it prepares fallow grounds, plows in wheat, covers peas and other spring grain requiring a deeper covering than the harrow gives, renders it a very desirable article to the farmer. We had not only ocular demonstration of its performances, but were shown very high commendations from some of the best farmers of Livingston county. We therefore recommend the awarding of a diploma to Thomas Wiard, of Avon, for his gang of plows.

Of sub-soil plows, only two were presented, both of which were thoroughly tested and highly approved by the committee. We believe the sub-soil plow worthy of a trial by our farmers, and an instrument which will do great service in heavy clay lands, and such as have impervious sub-soils. We feel that we could not do justice to either of these plows, by giving them the whole premium. We therefore have awarded to B. F. Smith, of Syracuse (Ruggles & Co., Mass.), $12, considering his plow superior in workmanship, and that it will do the best work in lighter clay soils. We award to S. McLean, of Royalton, Niagara county, $8, for his sub-soil plow, the construction of which is very simple, is so cheap as to be within reach of every farmer, and will work its way through the heaviest soils.

In closing their report, your committee would beg leave to suggest that a suitable premium be offered for the best dynamometer. The instruments now in use are very imperfect, and no certain test of the power required in the draught of a

plow. Such is the continually-varying resistance given by the inequality of the earth's surface, and the obstacles under it, that the index of the dynamometer revolves as rapidly as a weathercock in a storm. We want an instrument not so easily affected, or farther removed from continual fluctuations, which will note in single pounds the average power required in a given number of feet. Yankee ingenuity has evidently not been sufficiently employed in the construction of this instrument; and we are persuaded it needs but little encouragement from your society, to stimulate it to the production of an instrument which will render the power required in the draught of a plow, as easily determined as the power of a locomotive.

All of which is respectfully submitted, by your humble servants,

MYRON ADAMS,
C. S. BUTTON,
L. B. LANGWORTHY,
R. HARMOM, JR., } *Committee.*

Rochester, September 23, 1843.

THE PLOWING MATCH.

1st, to J. Howell, Chili, Monroe co.	$15
2d, to W. Utley, Phelps, Ontario co.	10
3d, To Wm. Craig, York, Livingston co.	5
4th, to George Sheffer, Wheatland, Monroe co. Vol. Tr.	

From the American Agriculturist Almanac.

NORTHERN CALENDAR FOR NOVEMBER.

IT is now time to close up the operations of the warm season, and provide for the cold. Finish collecting in all your crops, corn, turneps, cabbages, &c., and see that your cellars are well secured against frost, and your granaries against depredators. Finish the fall plowing. All clay land should be thrown into ridges for the action of the frost. One good plowing on such land in the fall, is worth two or three in the spring, and as this soil has a great affinity for ammonia while thus exposed, it will absorb large quantities of it brought down in the winter and spring, by the snows and rain, which it will yield to the crops the ensuing season. Examine the winter grain, and any water-furrows which have become choked up, let them be opened. *Standing water will kill any useful vegetable,* excepting rice.

The yards should be well bedded with turf, peat, or muck, weeds, refuse straw, and other vegetable matters; and so constructed that the soluble parts of it, which are the best, shall not be drained off to help inundate the roads and ditches. If time permits, drains should be made to carry off the latent water, which destroys the crops, or diminishes them so much as hardly to pay for the raising. Under-ground, in preference to surface drains, should always be constructed, unless large quantities of water are required to pass. Give all your roots in heaps for the winter, an additional covering before the ground is frozen. Have all the barns and sheds well covered and mended, and the racks and mangers all tight, and in order, that no hay or provender may be wasted. Before the ground is frozen, look well to your fences. No meadows, winter grain, or even pastures, should be exposed to poaching from cattle, sheep, or hogs. An animal will frequently do more hurt in one of them in a day at this season, than in a week while the ground is well settled in summer. In the meantime the household plants, the children should not be neglected, and especially the older ones, who have helped through the labors of the summer and harvests. Good schools must be provided for them, good teachers, and good books. Their minds now, and indeed at all times, should be as closely watched over, as the more tangible things of the farm. On their correct moral and intellectual education, depends much, perhaps all their success in after life, and no fences should be neglected, or bars left down in their young minds. Good seed sown here, on good soil, and well cultivated, if the weeds of vice and bad principles are thoroughly extirpated, will never fail of producing an abundant harvest. It is not sufficient that their parents see them furnished with all the means for mental improvement; they must take an interest in their studies also. Daily examination into the progress of their children, should be the constant practice of parents; questions asked having a bearing upon them; the connexion between their studies and their own business pointed out, to show that they have a practical application to the concerns of every-day life; and they should be explained and illustrated in such a manner as to excite an interest and inquiry in their young minds. The discipline of the school ought to be inquired into, and the relative standing of the children; and when praise is due bestow it; and where censure and even punishment are needed, they should not be withheld. No farmer would think of putting out his land to be managed by an agent, without frequent and close supervision. Do not, therefore, put out the minds of your children, which are of infinitely more value, to the management of every individual, without a closer and more thorough attention than he gives to his grounds and his cattle.

Commence spreading out hemp for dew rotting, bearing in mind the observations on this subject last month.

KITCHEN GARDEN.—If not done last month, many of the early vegetables may be sown for the ensuing spring, if you have not hot-beds for forcing. The beds ought to be thrown up high, so as to avoid water during winter and spring, and being soon dry when the snow is off, the young plants will take an early start. They should be well filled with the more heating manure, as horse-dung, &c. In these, tomatoes, lettuce, spinach, cress, &c., may be sown. The asparagus bed should have a large supply of rich manure, which the winter rains will drain of all its enriching, soluble matters, and carry to the lowest roots, and on the opening of spring, will be ready to furnish a fresh treat for the table. Let the lettuces in frames still be exposed to the air during the day, but be covered by the glass at night. Practise the same treatment with cabbages and cauliflowers in frames. Take up all remaining roots, and store them as detailed last month. Rhubarb seed can now be sown, and will vegetate better than if kept out of the ground until spring. In the early part of this month, manure and trench the ground intended for early spring crops.

FRUIT GARDEN AND ORCHARD.—Gooseberries, currants, and raspberries, may now be transplanted. Of the latter, the red and white Antwerp are considered the most desirable. Do this the early part of the month, and in the latter part lay down the raspberries, and cover them with sedge or any kind of litter. Cover the strawberries with litter, or they may be killed, or at least injured by the winter. Dig and trench or plough the ground intended for planting in the spring.

FLOWER GARDEN AND PLEASURE GROUNDS.—The directions for last month will also apply to this, while the ground is free from frost. The latter part of the month cover the flower borders and bulbous beds, and also all flowery plants and shrubs with a litter of straw or of salt hay.

FOREIGN AGRICULTURAL NEWS.

By the steampacket Hibernia, we have our files of European journals to the 4th October.

Markets.—*Cotton*, as we anticipated in our last, has advanced ¼d. per lb., with large sales. The *Wheat* crop proves lighter on harvesting than it promised, so that importations from other countries to a moderate extent will be demanded. *Lard* is getting more and more into use in England, and manufactories for the purpose of making it into oil and stearine have started. In other things we see little worthy of note, few or no changes having taken place since our last advices. Business generally continues good and money plenty.

Stocks.—These continue to improve, and a greater firmness is manifested in them. Investments, however, will be slow and cautious.

Farmers' Magazine.—*Starch from Rice.*—This starch, for the manufacture of which a patent has been obtained, has many qualities that render it more desirable for use than the ordinary starch made from wheat. It is finer, whiter, and perfectly free from impurities; while the linen and other materials in which it is used "retain their stiffness, resist the influence of a humid atmosphere, and are not liable to mildew." Another advantage which the article made from rice possesses over that produced from wheat is, that less by one fourth is required for the purposes of the laundry.

The New Farmers' Journal.—*Improvement in the Cultivation of Hops.*—To the list of the various purposes for which iron is employed, will probably soon be added the cultivation of hops. The Rev. Mr. Formby, vicar of Finsbury, has the credit of suggesting the improvement, which consists in stretching a stout wire along each alley, to which wire the poles are fastened. The advantages of this plan are, that poles of much less value than those usually employed may be used; that the injury from gales of wind is avoided; and that the alleys, being open to the influences of the sun and air, the mould, that fatal disease of the hop, is thus prevented. At Halling, near Rochester, a garden of nine acres thus cultivated affords a pleasing sight.

Rags as Manure.—The value of rags has been proved by Mr. P. Howard, of Dowlish Wake, near Bath, who dressed a forty-acre piece of land partly with rags and partly with lime, and put it into wheat. The result of which is, that the part dressed with rags is far superior to the lime part, producing stalks six feet four inches high, with the ears proportionably long and large, the produce averaging forty bushels an acre. Two other small pieces on the same farm, dressed with rags after potatoes and vetches, are equally prosperous. The old laborers of the place declare they do not recollect ever seeing such pieces of wheat before.

Prolific Sow.—Mr. John Fox, of Haverigg, Millom, has a sow which, in five farrowings, has brought forth the most extraordinary number of one hundred and five pigs.

Grass Lawns and Lands.—We have frequently been asked about the best method of preparing and seeding lawns in England; the following from the London New Farmers' Journal gives as good directions as we have seen.

Whatever ground is intended to be laid down as grass, should be thoroughly trenched or deeply dug, and completely cleared of all discriminate plants; it should then be brought to the required level, and the larger stones and rubbish raked off; the edges of the beds, walks, &c., should then be carefully formed, and firmly trod and beat, and then the whole surface well rolled, that it may settle equally; and finally, the edges carefully cut with a sharp spade, it will then be ready for sowing, and the following will be found a suitable selection of grasses for the purpose:—

For one acre of light sandy soil.—Agrostis stolonifera, 1 peck; anthoxanthum odoratum, 2 do.; festuca tenuifolia, 1 do.; festuca duriuscula 2 do.; festuca ovina, 1 do.; poa pratensis, 1 do.; poa trivialis, 1 do.; Italian rye-grass, 1 do.; Dutchclover, 1 do.

For one acre of strong light loamy soil.—Alopecurus pratensis, 1 do.; anthroxanthum odoratum, 1½ do.; agrostis vulgaris, 1 do.; festuca duriuscula, 1½ do.; festuca ovina, 1½ do.; Cynosurus cristatur, 1 do.; holcus lanatus 1½ do.; poa trivialis, 1 do.; poa pratensis, 1 do.; Italian rye-grass, 1 do.; Dutch clover, 1 do.

This will not be more than sufficient for the quantity of ground specified, and it should be carefully and evenly sown, and well raked in and rolled, if the weather permit. When the grasses come up, the ground should be carefully gone over and cleared of all weeds and spurious grasses, as they appear; strict attention to this will do to insure the future excellence of the lawn. During the first season after sowing, the grass may be mown three or four times, but not in hot, dry weather, and afterward, the oftener it is rolled and mown the better.

Sussex Express.—*South-Down Sheep.*—The rise of the Glynde flock took place upward of sixty years ago. The late Mr. Ellman selected the best animals he could find from all the flocks of the county, which occupied many years. Next he classified them, and after half a century's close attention, he secured a permanency of character for his sheep, to which may be traced all the leading improvements which the South-Down sheep generally have undergone; for until the established blood of the Glynde flock was introduced into the county flocks, the South-Down sheep was a very imperfect animal, in its flesh and in its wool, both of which were radically changed through the instrumentality of this distinguished Sussex farmer. Mr. Ellman before he died, had the pleasure of knowing that not only had the Sussex flocks undergone the most valuable changes, but also that the South-Down sheep were acknowledged to be the best sheep in the kingdom, and were adapted for most districts, furnishing per acre a greater weight of meat than any other sort. The consequence of this acknowledgment was, the substitution in several counties of our own county sheep; and even at the present time this practice is extending itself into other districts, and with so much success, that we find, at the national shows, distant flock-masters defeating our own neighbors even with our own sheep.

The Gardeners' Chronicle.—*Great Division of Wheat by its Roots.*—The newspapers have lately contained an incomplete account of an interesting experiment on the propagation of wheat by division of its roots, from which it appears that a field may be cropped with wheat without employing more than the 2,400th of the usual quantity of seed-wheat. By the kindness of Mr. Archdale Palmer we are now enabled to state the exact facts, which are explained in the following letter from that gentleman:—

"As my friend Mr. Pownall has anticipated my intention to make the following experiment public, which I have no doubt has attracted your attention, I can not longer delay transmitting it to you for the benefit of the Gardeners' Chronicle, agreeably to my original view, as soon as I had ascertained the actual result, and that could not be before the wheat was thrashed, which has been done this week.

"1842:—July. One grain of wheat sown in a pot

—August. The same divided into 4 plants, which three weeks after were again separated and made 12 plants —September. The same 12 plants were again separated, and made 32 plants—November.—The same 32 plants were again separated into 48 plants, which were then planted in the open ground, not particularly prepared for them, 18 inches from each other, occupying a space of 11 yards by 1 yard, being the 440th part of an acre; consequently, 440 grains would be found sufficient for one acre, which I find weigh ¾ of an ounce.

"1843:—August. Ten of the 48 plants died, and the remaining 38 plants were cut down, unfortunately, before the wheat was ripe, as the birds had already taken one fourth away. 1,972 stems were counted. It was thrashed this week, and the weight is 2½ lbs., which, according to the preceding calculation, consists of 22,000 grains. The wheat sown is known by the name of Eclipse. I have thus stated the simple facts; but there are many observations which will naturally arise in an inquiring mind, when it is known that the cultivators of the soil in this country do not reap, upon the average, above 30 bushels for 3 bushels sown. I am aware that a remark will be made of the trouble and some little expense for the garden-pots, which were 48s, if the experiment is carried on to a larger extent. But let every person interested in this account try themselves; they will, as well as myself, be astonished at the result."

It appears from this experiment, that by a new application of manual labor, *three quarters of an ounce* of seed-wheat will plant an acre of land. The quantity now used may be averaged at two bushels and a half, weighing about *a hundred and fifty pounds*. Sixty shillings a quarter will not be too high a price to take as the average value of seed-wheat, and therefore the saving in it will be about eighteen and sixpence per acre.

Of course the practical question is, whether this eighteen and sixpence will cover the cost of manual labor required for the operation of setting wheat instead of sowing it. If it does cover the expense, it would be an enormous gain to the country, because it would immediately afford a large amount of employment to those laborers, who not being able-bodied, are most in want of it. We doubt whether eighteen and sixpence an acre could be possibly expended in the operation, if judiciously conducted on a large scale; but that is a question which any intelligent farmer can answer better than we can.

We would only observe that if, as we are told, 3,800,000 acres are annually planted in wheat in England and Wales, the application of so large a sum as £3,500,000—which would be the amount of saving by Mr. Palmer's operation at the prices above assumed—to the relief of the poor, is something which demands a very different notice from that of a passing comment in a newspaper.

Ginger Wine.—Put 5 gallons of water to 16½ lbs. of lump-sugar, boil and skim it, then put in 5 oz. of ginger bruised (not ground), the peel of 3 lemons and 3 Seville oranges tied in a thin cloth; let it boil for half an hour, and put it into a vessel, and let it stand until just warm; then put in 1 spoonful of good yeast, and let it remain until next day slightly covered over. Wash out the barrel with some brandy; put into the wine the peel and juice of the oranges and lemons, and 2 lbs. of raisins cut open; stir it every day for a fortnight, and let the bung be put in lightly. Add 1 oz. of isinglass and 1 pint of brandy, and stop the barrel close. When done working, let the wine stand seven weeks before you bottle it.

New Phlox.—Another of those pretty varieties of Phlox suaveolens, with red introduced among the white flowers, has been raised by Mr. Van Houtte, and is, we understand, in the possession of the nurseryman under the name of *striata delicatissima*. Its flowers are delicately streaked all over with rose of different tints on a white ground.

Myatt's Strawberry.—Mr. Maund has lately tried the effects of Guano, and says, "it is quite evident that the luxuriant growth given by Guano to this shy-bearing strawberry, is highly advantageous to its fertility. Most persons agree in acknowledging Myatt's Pine strawberry to be the finest-flavored, and most difficult to cultivate successfully, of any in our gardens. We believe, however, that complaint against its fertility need no longer exist. If runners be planted as early as they can be obtained, certainly not later than July, and the beds be supplied with Guano-water, 4 oz. to the gallon, once a week, for four weeks, commencing as soon as the blossom-buds are visible in the hearts of the plants, we believe they will not fail to bear abundantly; and by maturing the latest flowers, will continue longer in bearing than many other sorts. Probably it would be advantageous to apply a little Guano to the plants in September; but if greatly stimulated at this season, the plants may possibly be driven into flower to the prejudice of the spring blossom."

Transactions of the Highland Ag. Soc. of Scotland.—*Experiment in Deep Plowing.*—The experiment was made upon a small field, which is sixty-five feet above the level of the sea. The soil is sandy, resting upon a sub-soil of sand and gravel of great depth, and so thoroughly drained by the declivity of the surrounding lands, that want of moisture is its natural defect. There is but little difference between the soil and the stratum on which it rests, beyond what culture and manure have made; but, from sinking of gravel, treading of horses, and pressure of the plow, year after year, and age after age, the sub-soil had become crusted, hard, and beaten as a road. In short, from shallow plowing, there was but little depth of cultivated earth, and, as on all such soils in dry seasons, the crop was scorched and scanty.

With a view to render this field fruitful in any season, it was sub-soiled with the Deanston plow, eighteen inches deep, and sown with wheat for crop 1837. The great vigor and luxuriance of the crop attracted general notice; and it must have yielded an extraordinary increase, if it had not been lodged by wind and rain shortly after the ear appeared. Therefore it gave only thirty-eight bushels of grain per acre, but three tons of straw, which proved its great strength. To this crop one of potatoes and two of wheat succeeded; but it is the culture of this field for crop 1841, and the result, which chiefly constitute this report.

It was all equally dressed with seaware; and four acres of the same quality and description were measured and staked off. Two of these acres were plowed twelve inches deep, with two horses, and two of them eighteen inches deep, with four horses. These two portions in all other respects were cultivated and managed exactly alike. They were planted with potatoes of the Don species, in the last week of April, eight inches deep, twelve inches asunder, and in drills thirty inches wide, running at right angles to the furrows of the experimental plowing. The potatoes were planted deeper than usual, therefore the shoots were longer in coming through the ground; but when they did appear, it was with great strength and regularity. They expanded their broad deep-green leaves, and grew vigorously, in the dry sandy soil, in a very severe and long-continued drought. It was soon evident that the deep-

est-plowed portion had the advantage; the stems and branches of its plants were stronger, and they first covered the ground.

The potatoes were lifted in the last week of October, when it was found that the land plowed twelve inches deep produced fifty-seven bolls per acre, and the land plowed eighteen inches deep produced sixty-nine bolls per acre, being a difference of twelve bolls per imperial acre, of four cwt. to the boll.

It is a condition annexed to the premium offered by the Highland and Agricultural Society for experiments in deep plowing, that one half of the land used "shall be cultivated in the ordinary way." By evidence before the Agricultural Committee in 1836, the depth of plowing in this county is from *six* to *nine* inches. If that depth had been taken for the lowest extreme in this experiment, the difference in the production of the two portions, it is believed, would have been greater; but as this field had been plowed twelve inches deep for years, its ordinary depth was adhered to, and the difference is certainly sufficient to establish the advantage of deep plowing.

As to the quality, it is excellent for the season from both portions of the land, and in that respect there is no difference. The potatoes from the deep tillage were larger, more of one size, had fewer small ones, and not so many of a green color as those from the other division.

The quantity on the deep tillage is eighty-seven bolls per Scots acre, which is a good crop for any year; and it will readily be granted that it is far above the average of the district this year, many fields not producing half a crop. A superiority so striking must therefore be ascribed to deep culture, being on both portions deeper than ordinary, which furnished moisture in a very dry and scorching season to a sandy soil, and raised its produce above that of richer lands. But though this is a great crop for the season, it must have been still greater if the field had been less exposed, as it has no shelter; and three days of very violent wind, in the first week of August, broke down the plants, which, from their great luxuriance were then very tender, and checked their growth.

The practical conclusions to be drawn from this experiment are—

First, That deep plowing increases the produce.

Next, That, as both portions of the land used in the experiment were opened up eighteen inches deep by the sub-soil plow for crop 1837, the full benefit of that operation is not obtained till the earth so loosened is again plowed up. And the reason is evident; for it is then only that the soil is deepened, by an addition from the sub-soil with which it is intermixed, and rendered more fruitful.

Lastly, If deep plowing increases the produce, it increases also the supply of vegetable manure; and a greater portion of manure, added to improved culture, must produce a progressive increase of fertility and of produce.

This experiment was begun on the glebe of Dunbar for the amusement of the reporter, and before he knew that any premium upon the subject was offered by the Highland and Agricultural Society.

To Destroy Red Spiders.—Persevere in syringing vines and plants infested by this insect, night and morning as this is an effectual means of destroying them.

Organizable Substance.—As a plant proceeds in its growth, it first forms its organs out of matter previously stored up within it, and then, having formed them, it proceeds to secrete a further supply of such matter for the next season's growth.

Editor's Table.

THE COMPLETE COOK.—Plain and Practical Directions for Cooking and Housekeeping; with upward of seven hundred Receipts: consisting of Directions for the Choice of Meat and Poultry; Preparations for Cooking, making of Broths and Soups; Boiling, Roasting, Baking, and Frying of Meats, Fish, &c.; Seasonings, Colorings, cooking Vegetables; preparing Salads, Clarifying; making of Pastry, Puddings, Gruels, Gravies, Garnishes, &c., and with general Directions for making Wines. With additions and alterations, by J. M. Sanderson, of the Franklin House. Lea & Blanchard, Philadelphia.—This is a republication of a standard English work, adapted by the experienced Mr. Sanderson to the American housewifery practice. Need we say more to recommend it to our readers? It is a handsome octavo of 196 pages, price 25 cents. How the publishers can afford such a work for so small a sum, we are really at a loss to divine. We recommend every husband to make a present of it to his wife, and every father to his daughter, for we are sure it would be twenty-five cents well laid out.

THE CONNECTICUT FARMERS' GAZETTE.—No. 1 of Volume IV. of this periodical was issued on the 1st of October. It is nearly the size of our own periodical, 16 pages, semi-monthly, price one dollar a year, published in New Haven. We observe that Mr. Wood has retired from the editorial charge of the Gazette, and that it is hereafter to be conducted by its proprietor, William Storer. From the specimen he has given us in his first No., we think well of it, and have no doubt Mr. Storer will conduct it in such a manner, as to make it deserving a good circulation among the farmers of Connecticut.

THE MAGAZINE OF HORTICULTURE AND BOTANY, by C. M. Hovey of Boston, Mass. Saxton & Miles, 205 Broadway, having been appointed Agents for this city, subscriptions will be received at their bookstore for the above periodical. It is the only magazine of the kind published in the United States; and is an indispensable work to the gardener, nurseryman, and amateur. In addition to his constant practical experience at home, Mr. Hovey is making frequent excursions to different parts of the country, for the purpose of keeping up with, and personally inspecting, the improvements that are going on in horticulture, &c., which keeps him at the top of his profession, and enables him with his other high qualifications, to conduct his magazine with great satisfaction to its numerous subscribers. We heartily recommend this work to the public.

DESCRIPTIVE CATALOGUE for 1843-'44 of Fruit and Ornamental Trees, Shrubs, Vines, Plants, &c., cultivated and for sale at the ancient and celebrated Linnæan Botanic Garden and Nursery, Flushing, Long Island, near New York, with directions for their culture, &c., by Winter & Co. We have no recollection of having seen so full and complete a catalogue of the Garden and Nursery, as has been laid upon our table by the proprietors of the celebrated Linnæan establishment. It is a beautiful pamphlet of 92 pages, large octavo size, with an extra member of columns in it, describing minutely, not only fruits, their size, form, and taste, but ornamental trees and plants; classifying them according to height; color of the flower of herbaceous plants; together with extensive remarks and instructions for the cultivation of all; making the catalogue in fact an excellent horticultural work, no less valuable than safe as a reference on these important subjects. It will be sent gratis to all those who apply *postage free*.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, OCTOBER 28, 1843.

ASHES, Pots,	per 100 lbs.	$4 50	to	$4 62	
Pearls,	do.	5 25	"	5 38	
BACON SIDES, Smoked,	per lb.	4½	"	5½	
In pickle	do.	5	"	5½	
BALE ROPE	do.	6	"	9	
BARK, Quercitron	per ton	23 00	"	24 50	
BARLEY	per bush.	44	"	50	
BEANS, White	do.	1 12½	"	1 25	
BEEF, Mess	per bbl.	6 00	"	7 00	
Prime	do.	4 00	"	5 00	
Smoked	per lb.	7	"	7½	
Rounds, in pickle	do.	4	"	5½	
BEESWAX, Am. Yellow	do.	28	"	30	
BOLT ROPE	do.	12	"	13	
BRISTLES, American	do.	25	"	65	
BUTTER, Table	do.	12	"	15	
Shipping	do.	6	"	10	
CANDLES, Mould, Tallow	do.	9	"	12	
Sperm	do.	32	"	38	
Stearic	do.	20	"	25	
CHEESE	do.	4	"	7	
CIDER BRANDY, Eastern	per gal.	35	"	40	
Western	do.	28	"	35	
CLOVER SEED	per lb.	7½	"	8½	
COAL, Anthracite	2000 lbs.	4 50	"	5 50	
Sidney and Pictou	per chal.	8 00	"	8 50	
CORDAGE, American	per lb.	11	"	12	
CORN, Northern	per bush.	55	"	56	
Southern	do.	52	"	54	
COTTON	per lb.	6	"	11	
COTTON BAGGING, Amer hemp	per yard.	16	"	18	
American Flax	do.	15	"	16	
FEATHERS	per lb.	28	"	34	
FLAX, American	do.	8	"	8½	
FLAX SEED, rough	per 7 bush.	8 75	"	9 00	
clean	do.	— —	"	— —	
FLOUR, Northern and Western	per bbl.	4 50	"	4 75	
Fancy	do.	5 50	"	5 62½	
Southern	per bbl.	4 25	"	4 75	
Richmond City Mills	do.	5 75	"	6 00	
Rye	do.	2 87	"	3 12	
HAMS, Smoked	per lb.	5	"	7½	
Pickled	do.	4	"	5	
HAY	per 100 lbs.	38	"	42	
HIDES, Dry Southern	per lb.	9	"	11	
HEMP, Russia, clean	per ton.	185 00	"	190 00	
American, water-rotted	do.	140 00	"	180 00	
do dew-rotted	do.	90 00	"	140 00	
HOPS	per lb.	6	"	8	
HORNS	per 100	1 25	"	5 00	
LARD	per lb.	5½	"	8	
LEAD	do.	3½	"	4	
Sheet and bar	do.	4	"	4½	
MEAL, Corn	per bbl.	2 75	"	3 00	
Corn	per hhd.	12 50	"	13 00	
MOLASSES, New Orleans	per gal.	24	"	26	
MUSTARD, American	per lb.	16	"	31	
OATS, Northern	per bush.	25	"	28	
Southern	do.	21	"	23	
OIL Linseed, American	per gal.	75	"	80	
Castor	do.	90	"	1 00	
Lard	do.	55	"	65	
OIL CAKE	per 100 lbs.	1 00	"	— —	
PEAS, Field.	per bush.	1 25	"	— —	
PITCH	per bbl.	1 12½	"	1 37	
PLASTER OF PARIS	per ton.	2 00	"	2 25	
Ground, in bbls	per cwt.	50	"	— —	
PORK, Mess	per bbl.	10 00	"	11 00	
Prime	do.	9 25	"	10 12	
RICE	per 100 lbs.	2 75	"	3 12	
ROSIN	per bbl.	65	"	1 00	
RYE	per bush.	67	"	68	
SALT	per sack	1 35	"	1 50	
SHOULDERS, Smoked	per lb.	3	"	4½	
Pickled	do.	3	"	4	
SPIRITS TURPENTINE, Southern	per gal.	38	"	40	
SUGAR, New Orleans	per lb.	6	"	7	
SUMAC, American	per ton	25 00	"	27 50	
TALLOW	per lb.	7	"	7½	
TAR	per bbl.	1 25	"	1 50	
TIMOTHY SEED	per 7 bush.	13 00	"	14 00	
TOBACCO	per lb.	3	"	6½	
TURPENTINE	per bbl.	2 37	"	2 62	
WHEAT, Western	per bush.	95	"	1 00	
Southern	do.	85	"	95	
WHISKEY, American	per gal.	23	"	25	
WOOL, Saxony	per lb.	35	"	50	
Merino	do.	30	"	35	
Half-blood	do.	25	"	27	
Common	do.	18	"	22	

New York Cattle Market—October 30.

At market, 1,150 beef Cattle, (150 southern), 35 Cows and Calves, and 2,850 Sheep and Lambs.

PRICES.—*Beef Cattle* were very dull of sale, and a decline of full 50 cents per cwt. submitted to, and we quote ordinary to good cattle $4 *a* $4 50, with occasional sales at $5. 600 unsold.

Cows and Calves.—All taken at $18 *a* $25 to $28 50.

Sheep and Lambs.—Sales of 2,500 at $1 *a* $2 37½ for Lambs, and $1 25 *a* $4 for Sheep, as in quality.

REMARKS.—*Ashes.* These are in fair demand, and considerable activity maintained in exports. *Cotton.* The news of an advance in England of ¼d. per the Hibernia, had no effect on this market, the article having risen in anticipation some time before; but the injury by early frosts at the south, has had the effect of raising it to-day ¼ cent per lb., at which advance large sales were made. Exports from the United States since 1st September last, 11,320 bales; same time last year, 37,593; same time year before, 37,759. It is now thought that the crop of this year can not more than two thirds equal that of the last. *Flour* has advanced a trifle since our last; it is doubtful, however, whether this can be maintained any length of time. A tolerably active business is doing in the article. *Grain.* Wheat is far from being plenty, and is taken at a small advance as fast as it arrives. *Corn, Rye,* and *Oats,* in good request. American *Hemp* is scarce, and is held at an advance. *Molasses* continues depressed; *Rice* and *Sugar* very firm. *Naval Stores* quick, at a small advance. *Plaster of Paris,* scarce and wanted. *Provisions,* on the whole very little change; if anything, they have a downward tendency, with the exception of *Lard.* The western farmer need not fear turning too much of his pork into lard this year; it will all sell at good prices. *Stearine.* There has been a sale of 2,500 lbs. of this article at 6⅞ cents. *Hogs.* A heavy contract of 500, of average quality, at 2½ cents per lb., has been made in Cincinnati; but this is not considered as establishing the price for the season. Our opinion is, that pork will rule as high as 3 cents for first quality, and our advice to the farmers is *not to take less. Tobacco.* The low-priced qualities are in good demand; others dull.

Stocks have advanced a trifle since our last.

Money. The banks are endeavoring to get the rate up to 6 per cent., but have not succeeded to any extent yet. As the increased amount of paper given on the business transactions of the season matures, we are of opinion the value of money will rise, and that it can not be had much longer for less than 6 to 7 per cent. A few new private banks have been recently started, and others are in contemplation.

TO CORRESPONDENTS.—John Lewis, A Learner, R. A. Avery, H. D. Grove, Wm. Partridge, and R. L. Allen, are received, and will find place in our next.

C. M. G., Your questions about sheep, wool, &c., are answered in back Nos. of our paper, which we have sent you.

G. S. Both yourself and M. B. are sent samples of Rambouillet wool in the manner desired. Our publishers have not received subscription spoken of, from G. S., either for last year or this. If sent, please state conveyance. The Bellevue Talevera wheat is not as good as Gen. Harmon's White Flint, for our climate, and it would cost four times as much. See Vol. I., page 344, of this paper.

W. C. A seedsman of this city has sent to Germany for Spurrey, and will supply you in March.

A Farmer. Your communication is a mere advertisement, and inadmissable except as such.

J. C. Your Herd-Book just received from England, is sent as directed.

The Prairie Farmer, and Dollar Farmer, will each please send a copy of their journal to R. L. Allen, Buffalo, and we will pay them by a bound volume of ours at the end of the year. Commence with all the Nos. of current Volume. The P. F. may omit its cover. One copy only of their paper need be sent to this office.

Will the writer of Taking the Census in Alabama, favor us with an article on Southern Farming? We will reciprocate the favor as he may please to designate.

BLACK GALLOWAY CATTLE.

A pure-bred imported cow, and a bull of the Galloway or Kyloe breed of Scotch Highland cattle, are for sale in this vicinity. These animals are very fine of their kind, and were chosen from one of the most celebrated breeders of this stock in Scotland. The cow took several prizes at the agricultural shows before being shipped to this country, and gives a superior quality of milk. The bull is quite equal to the cow, and they will be sold at a reasonable price.

Apply, post paid, to the Editor of this paper.

AYRSHIRE AND YORKSHIRE CATTLE.

Superior cows and great milkers, of the Ayrshire and Yorkshire stock, recently imported from Scotland and England, can be had on reasonable terms. They are in the vicinity of this city, and can be seen any time, upon a few hours' notice.

Apply, post paid, to the Editor of this paper.

FARMING LANDS FOR SALE.

For sale, about 500 acres of choice farming lands, lying on the Erie canal and Niagara river, 5 miles from Buffalo, and one mile below the Hydraulic Works in Black Rock. There is a due proportion of cleared and timber land, and the soil is equally adapted for grain, grass, and roots. Its proximity to an extensive and growing market, as well as the convenience, beauty, and healthfulness of the location, render this one of the most desirable situations in western New York. The most liberal credit will be given to purchasers.

Address, post paid, R. L. ALLEN, 156 Main st., Buffalo.

LINNÆAN BOTANIC GARDEN AND NURSERY—LATE PRINCE'S.

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The New Descriptive Catalogue, not only of Fruit, but also of Ornamental Trees, Shrubs, and Plants, cultivated and for sale at this ancient and celebrated Nursery (known as Prince's, and by the above title for nearly fifty years), with directions for their culture, may be had *gratis* on application to the new proprietors by mail, post paid. The collection at this establishment is unrivalled, and prices generally very much reduced; and the proprietors flatter themselves that the catalogue will be found to surpass in extent of information and usefulness, anything of the kind ever before presented to the public, and to be worthy of a permanent place in the library of the horticulturist. Orders will be promptly executed.

WINTER & Co., Proprietors.

Flushing, Oct. 24th, 1843.

A STOCK MAN WANTED TO GO SOUTH.

A planter, in the state of Georgia, wishes to engage a faithful competent man to take charge of his stock. If he be married, and his wife be a good dairywoman, she will also find employment. The situation is in the interior of the country, and *quite healthy*. None need apply if above middle age, or who have not had some experience in their business in this country, and can bring the best of references.

Address the Editor of this paper.

BUSINESS AGENCY.

The Subscriber will attend promptly to the execution of all orders for the purchase of stock, agricultural implements, or merchandise of any kind; also the negotiation of loans, sales of lands, payment of taxes, &c. He has been more or less engaged in mercantile pursuits in this city for ten years, and has an extensive acquaintance with moneyed men, and a thorough knowledge of business in general. Cash or produce must invariably be in hand, before orders for purchases can be executed.

A. B. ALLEN.

205 Broadway, New York.

CHEAP CASH BOOKSTORE,

205 BROADWAY, NEW YORK.

Saxton & Miles, Publishers, and dealers in Books in every department of Literature, at very reduced prices for *cash*.

S. & M. publish the following Book, which should be in every family in the United States: GUNN'S DOMESTIC MEDICINE, or the Poor Man's Friend.

Among the many publications of more than doubtful utility, with which our presses groan, it is pleasant to offer to the public one which, while it can not injure the mental and moral powers, is capable of improving our health and prolonging our days. It is now about ten years since this work was first published, since which time it has passed through many large editions, and the astonishing number of *one hundred thousand* copies has been sold in the southern and western states, and the demand is increasing.

It has just been revised and corrected, containing 900 pages, and executed in superior style. People may be disposed to smile when we tell them that they can save money by purchasing this book, but we think we can satisfy them that such is the fact. In every family more or less is paid yearly for doctor's bills. A child is taken with a fever, or some other complaint, and from ignorance nothing is or can be done effectually to check it. The physician is called, and a large bill is contracted; whereas, had GUNN'S DOMESTIC MEDICINE been on hand, a remedy could easily have been found which would have checked the disease in its first stage, and not only have saved the purse, but perhaps the life.

American Agriculturist Almanac for 1844.

This work comprises 64 pages, double columns octavo, with numerous wood cuts, price $8 per hundred, 12½ cents each. In the contents will be found—Agricultural Statistics of the United States—Aspects and Nodes—Astronomical Calendars for Montreal, Boston, New York, Philadelphia, Charleston, and New Orleans—Characters and Names of the Planets, &c.—Farmers' Northern Calendars, with particular directions for the management of the Farm, Cattle, Fruit and Flower Garden, &c.—Southern Calendars for the Planter and Farmer, with explicit directions for the culture and harvesting of Cotton, Rice, Tobacco, &c., &c.

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TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

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ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume 1 of THE AMERICAN AGRICULTURIST, with table of contents complete, for sale at $1; handsomely bound in cloth, $1 25. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies; to which, when several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

STOCK FOR SALE.

R. H. Hendrickson & Co., of Middletown, Butler county, Ohio, will promptly attend to orders for Short-Horn Cattle, Bakewell, Merino, South-Down, and Saxon Sheep; also for Berkshire pigs from Windsor Castle, imported from England, and twenty choice Berkshire sows, a part of which were also imported. Windsor Castle stands 3 feet high, and is estimated by competent judges to weigh 1000 lbs. Pigs of crosses with the imported Kenilworth, the large Miami, Byfield, and Grazier stocks, will likewise be furnished.

None but choice specimens of any of the above stock will be supplied, and at prices corresponding with the times. Address, post paid, as above.

Oct. 12th, 1843 R. H. HENDRICKSON & Co.

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